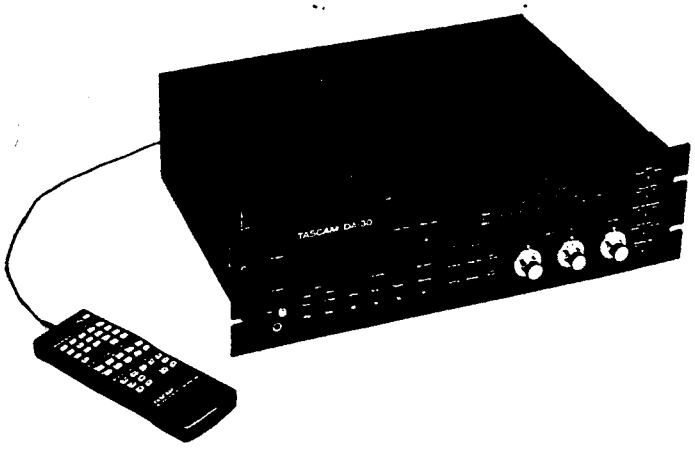


TASCAM
TEAC Professional Division

SERVICE MANUAL

DA-30

Digital Audio Tape Deck

NOTES

As regards the resistors and capacitors, refer to the circuit diagrams and the PCB ass'y drawings contained in this manual.

* Parts marked with * require longer delivery time.
* Resistor values are in ohms (k = 1,000 ohms, M = 1,000,000 ohms).
* All capacitor values are in microfarads (p = picofarads).
* ⚠ Parts marked with this symbol are safety critical components. They must always be replaced with identical components — refer to the TEAC parts List and ensure exact replacement.
* 0 dB is referenced to 1V in this manual unless otherwise specified.
* PC boards shown are viewed electro-parts side.
* Parts not shown in the parts lists or parts, through listed, having no parts numbers are not general "ready-to-supply" parts.

注意

標準の抵抗：コンデンサーは省略してあります。回路図及び基板図を参照してください。

1. 基板図は部品面が示されています。
2. ＊印の部品は納期が若干かかります。あらかじめご了承ください。
3. ⚠印は安全規格重要部品です。交換するときは必ずティアック指定の部品を使用して下さい。
4. レベルは0dB＝1Vを基準にしています。
5. コンデンサの単位はμF.p＝pF（1μF＝1,000,000pF）
6. 製品が改善されているために、製品と回路図が一部異っている場合があります。
7. リストされていない部品は原則としてサービス供給部品として取扱っていません。

Effective: JUNE, 1990 940356

5704049900

1. SPECIFICATIONS

Category:	Rotary Head Digital Audio Tape Recorder
Tape Speed:	8.15 mm/sec. in play/record (play speed of 12.225 mm/sec. also supported)
Record Time:	120 minutes (with R-120 cassette)
Head Drum Speed:	2,000 rpm (in record/play)
Fast Winding:	70 seconds (approx.) (with R-120 cassette)
Error Correction:	Octet (eightfold) correction
Channel Number:	2
Quantization Bit:	16 bit linear
Sampling Rate:	48 kHz (in play/record) 44.1 kHz (in play/record) 32 kHz (in play, and record with digital inputs)
Frequency Response (Record):	1-22,000 Hz +/–0.5 dB
Signal-to-Noise Ratio:	Better than 94 dB
Dynamic Range:	Better than 94 dB
Total Harmonic Distortion:	Less than 0.004 % (at 1 kHz)
Channel Separation:	Better than 94 dB (at 1 kHz)
Wow and Flutter:	Unmeasurable (less than +/–0.001 %)
Input – Analog	
BALANCED:	XLR type connector (XLR-3-31) x 2; Pin 1 Shield, Pin 2 Low, Pin 3 High
Nominal Input Level:	+4 dBm (1.23 volts)
Input Impedance:	10k ohms
UNBALANCED:	RCA jack x 2
Nominal Input Level:	–10 dBV (0.316 volt)
Input Impedance:	50k ohms
– Digital	
AES/EBU Port:	XLR type connector (XLR-3-31); Pin 1 Shield, Pin 2 Low, Pin 3 High
Coaxial Port:	RCA jack
Output – Analog	
VARIABLE:	
BALANCED:	XLR type connector (XLR-3-32) x 2; Pin 1 Shield (GND), pin 2 Cold (Low), pin 3 Hot (High)
Nominal Output Level:	+4 dBm (1.23 volts)
Output Impedance:	10 ohms
Maximum Output Level:	+22 dBm (9.75 volts)
UNBALANCED:	RCA jack x 2
Nominal Output Level:	–10 dBV (0.316 volt)
Output Impedance:	470 ohms
Maximum Output Level:	2.5 volts
FIXED; UNBALANCED:	RCA jack x 2
Nominal Output Level:	2.0 volts
Output Impedance:	470 ohms
Maximum Output Level:	2.5 volts
PHONES:	1/4" jack x 2
Output Level:	100 mW or more (8 ohms)
– Digital	
AES/EBU Port:	XLR type connector (XLR-3-32); Pin 1 Shield (GND), pin 2 Cold (Low), pin 3 Hot (High)
Coaxial Port:	RCA jack
Remote Connection:	Mini-jack
External Control I/O Port:	D-sub 15 pin (female)
Power Requirements	
USA/CANADA:	120 V AC, 60 Hz
U.K./AUSTRALIA:	240 V AC, 50 Hz
EUROPE:	220 V AC, 50 Hz
General Export Model:	100/120/220/240 V AC, 50/60 Hz
Consumption:	34 Watts
Dimensions (WxHxD):	482 x 150.5 x 346 mm (19" x 6-1/16" x 13-5/8")
Weight:	9.5 kg, 20-15/16 lbs. (remote not included)

Changes in specifications and features may be made without notice or obligation.

1.仕　様

型式		回転ヘッド方式デジタル・オーディオ・テープ・レコーダー
テープ・スピード		8.15㎜/sec（再生時は12.225㎜/secにも対応）
録音時間		120分（120分テープ使用時）
ドラム回転数		2,000rpm（録音／再生時）
早送り／巻戻し		約70秒（120分テープ使用時）
エラー訂正方式		8重エラー訂正
チャネル数		2チャネル
量子化ビット数		16ビット・リニア
サンプリング周波数	48kHz：	再生・録音
	44.1kHz：	再生・録音
	32kHz：	再生・録音はデジタル入力のみ
録音周波数特性		1～22,000Hz±0.5dB
S/N比		94dB以上
ダイナミック・レンジ		94dB以上
全高調波歪み率		0.004%以下（1kHz）
チャネル・セパレーション		94dB以上（1kHz）
フウ・フラッター		測定限界（±0.001%）以下
入力端子		
●アナログ		
LINE IN：		
BALANCED：		XLRタイプ・コネクター（XLR-3-31TYPE）×2
UNBALANCED：		RCAピン×2
●デジタル		
AES/EBU：		XLRタイプ・コネクター（XLR-3-31TYPE）
同軸：		RCA ピン
出力端子		
●アナログ		
LINE OUT：		
BALANCED：		XLRタイプ・コネクター（XLR-3-32TYPE）×2（出力可変） 最大出力レベル22dBm
UNBALANCED：		RCAピン×2（出力可変） 最大出力レベル2.5V
UNBALANCED：		RCAピン×2（出力固定） 最大出力レベル2.0V
PHONES：		φ6.3ホン・ジャック×1 出力レベル100mW以上（8Ω負荷）
●デジタル		
AES/EBU：		XLRタイプ・コネクター
同軸：		RCA ピン
リモコン入力端子：		φ3.5ミニチュア・ジャック
コントロール入出力端子：		D-SUB　15ピン（メス型）
電源		100V AC 50/60Hz
消費電力		34W
外形寸法		W482×H150.5×D346㎜
重量		9.5kg

＊仕様及び外観は，改善のため予告なく変更することがあります．
＊製品の改善により，取扱説明書の写真が一部，製品と異なることがあります．あらかじめ，ご了承ください．

2. REMOVAL OF COMPONENTS
各部品の外し方

2-1. Flowchart

Remove the components in sequence, referring to the flowchart below.
For removal, refer to the page shown.

2－1．フローチャート

各部品を取外すときは，下記のフローチャトに従って順番に外して下さい．

取り外し方は，各ページを参照して下ださい．

Disassembly flowchart of main parts

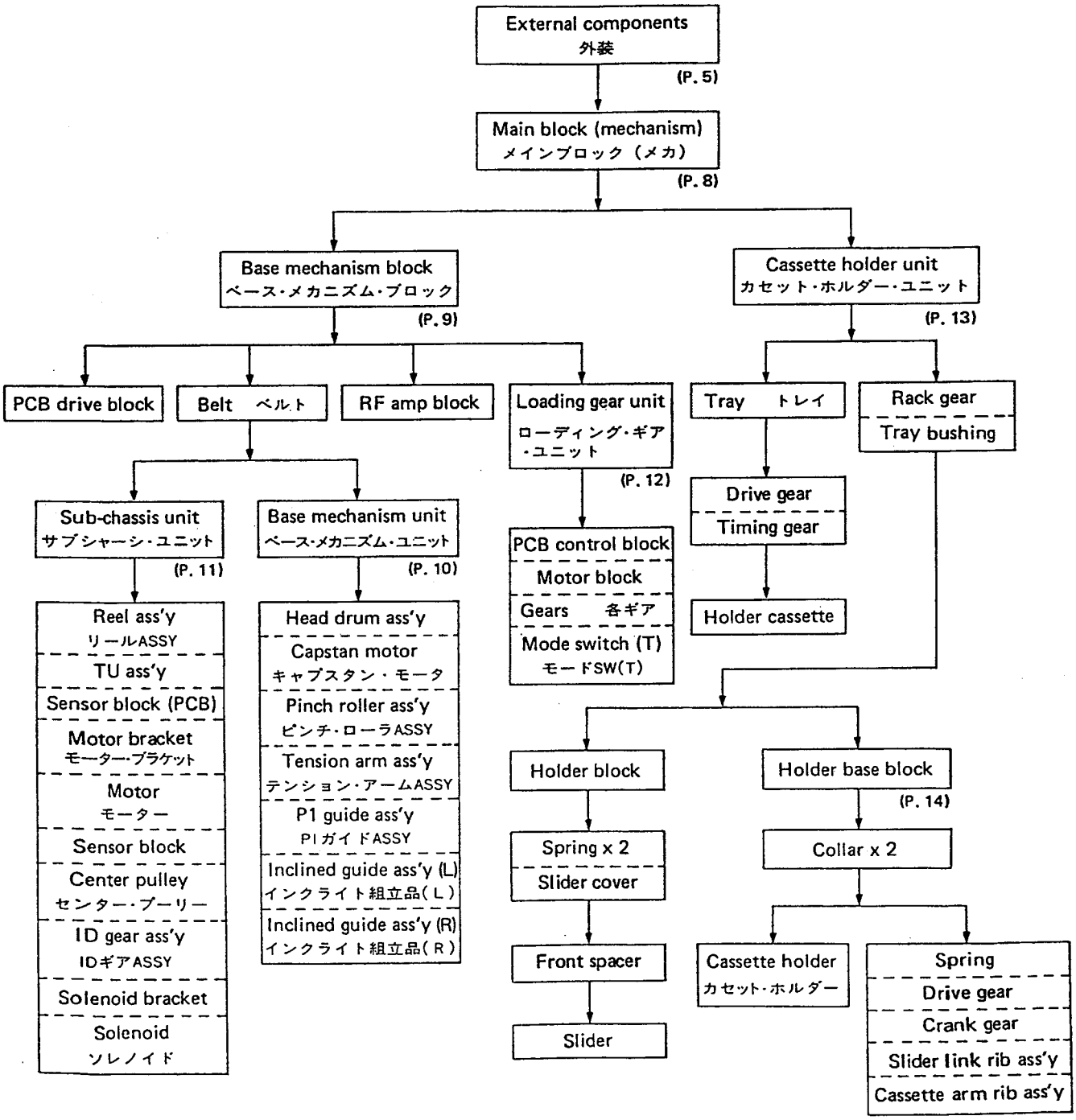


Fig. 2-1.

2-2. Removal of External Components

2－2．外装部品の外し方

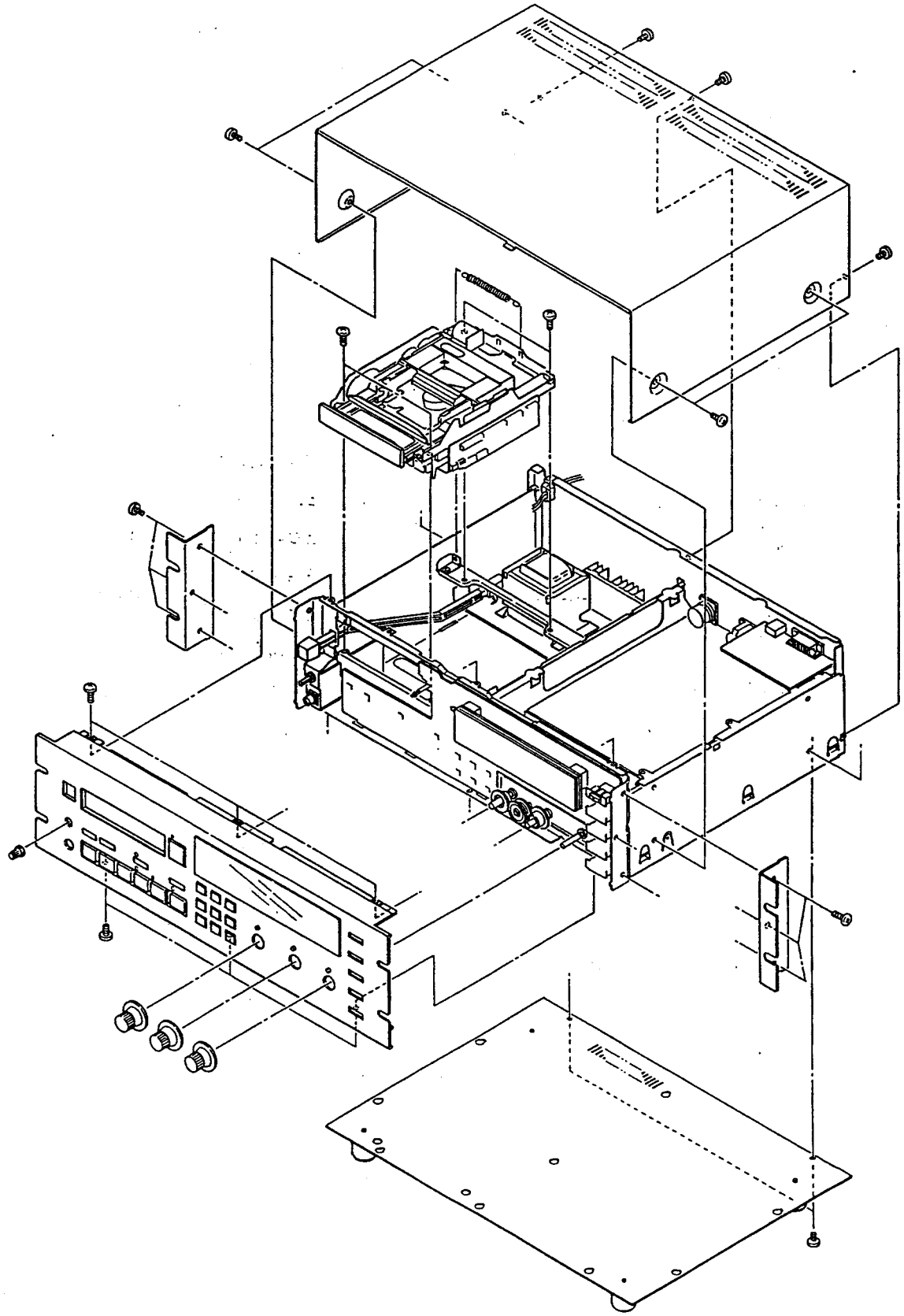


Fig. 2-2

2-3. Removal of Mechanical Parts

This section shows the disassembly procedure; to reassemble, reverse the procedure. When reassembling, see that the cables are not trapped and pinched by metallic edges (the chassis, etc.) as wire restraints are used when routing or dressing cables. When an E-ring or washer has been removed, do not use it again.

2-3-1. Cautions in handling the mechanism ass'y

1. Mechanism
   - A. When lifting the mechanism ass'y, do not hold both edges with one hand; hold the right and left edges of the chassis with two hands.
   - B. Do not touch the head drum.
   - C. Do not apply force when installing the mechanism ass'y. After removing the mechanism ass'y, always place it the right side up.
     If it must be placed upside down for any reason, place a protective sheet such as bubble packing, etc. under it to protect the exterior of the cassette holder.
   - D. Do not touch the tip of the flexible PC board. Also do not pull or bend it strongly.
   - E. Do not lift the mechanism ass'y by the flexible PC board or leads.
   - F. Do not touch the guide roller with your bare hands. To clean dirt or dust off the roller, wipe it gently with a cotton swab moistened with alcohol.
   - G. Do not touch the portions of the posts which come into contact with the tape. Do not scratch them with tweezers, screwdriver, etc. and be careful not to touch them with magnetized tweezers, screwdriver, etc.
   - H. Do not touch the rubber portions of the pinch roller or belt and the felt portion of the tension band, etc. with greasy fingers.
   - I. Do not touch the pulley over which the belt is hooked with greasy fingers, etc.
   - J. When disassembling the mechanism ass'y, pay attention to the following:
     (1) The counter torque when screw-locking compound is not applied is maintained at 1 kg·cm or more; therefore, be careful.
     (2) If a screw secured with screw-locking compound is removed, reapply the compound after reinstaling it. Tightening screws with too much torque may strip the screw threads; be careful.
   - K. When removing the coil spring, take care so that the hook is not deformed.
   - L. When the head becomes dirty, use a cleaning tape.

2－3．機構部品の外し方

この項では外し方を主に記述しますが，組立は分解の逆の手順で行なって下さい．その際の線材処理時に，結束部品により線材をシャーシー等，金属部エッジに挟み込むことのない様に注意して下さい．

又，Eリング，ワッシャーを一度外した場合は，再使用しないで下さい．

2－3－1．メカニズム Assy 取扱上の注意

1．メカニズム

- A．メカニズム Assy を掴むときは，片手で両側を強く掴まないこと．シャーシの左右の端を両手で掴むこと．
- B．シリンダーのドラム部には手を触れないこと．
- C．メカニズム Assy を置くときは，衝撃を与えない様に置くこと．又，メカニズム Assy は通常方向へ置く事とし，止む終えず逆様に置く場合は，下にエアー・パッキン等保護材を敷き，カセット・ホルダーの外装部品を保護すること．
- D．フレキの先端部に手を触れないこと．又，フレキを強く引っ張たり曲げたりしないこと．
- E．フレキまたはリード線を持ってメカニズム Assy を持ち上げないこと．
- F．ガイド・ローラーのローラーには手で触らないこと．汚れを拭くときは，アルコールを綿棒に浸して軽く拭くこと．
- G．各ポストのテープ走行面に手で触らないこと．ピンセットやドライバーで傷を付けないこと．又，磁化されたピンセット，ドライバー等で触らないこと．
- H．ピンチローラー，ベルトのゴム部，テンション・バンド等のフェルト部に油の付いた手で触らないこと．
- I．ベルトのかかるプーリ等にグリスの付いた手で触らないこと．

2. Head Drum
   A. Do not touch the surface of the drum with which the tape comes into contact.
   B. When lifting the drum, hold both sides of its base.
   C. When placing the drum on a work bench, place it on a soft mat so that no load or impact is applied to the rotor of the drum and motor.
   D. Do not lift the drum by its leads.
   E. Do not do any soldering near the drum.
   F. Do not apply an external force to the upper drum.
3. Capstan motor
   A. Do not let the tip of the screwdriver or a metallic object come into contact with the rotor. Especially a magnet (or magnetized object) should not be brought close to the rotor.
   B. Do not place motors next to each other. (Be careful that the rotors do not come into contact with each other.)
   C. Do not touch the PG sensor with your fingers.
   D. Do not lift the motor by the flexible PC board.

J．メカニズム Assy の分解のときは，次の点に注意すること．

(1).ネジロックの付いていない戻しトルクは，1Kg-cm以上で管理しているので注意が必要です．

(2).ネジロックが付いているネジを外した場合は，ネジロックをすること．強く締めすぎるとネジバカになるので注意が必要です．

K．コイル・スプリングを外すときは，フックの変形に注意すること．

L．ヘッドが汚れた場合は，クリーニング・テープを使用すること．

2．シリンダー

A．シリンダーのテープ走行面には，手を触れないこと．

B．シリンダーを掴むときには，シリンダー・ベースの両端を持つこと．

C．シリンダーを置く場合には，ドラム及びモーターのローターに荷重，衝撃を与えない様に軟らかい物の上に置くこと．

D．リード線を持ってシリンダーを持ち上げないこと．

E．シリンダーの近くで半田付けをしないこと．

F．上ドラムに外力を加えないこと．

3．キャプスタン・モーター

A．ローターにはドライバーの先を接触させたり，金属の物などを当てないこと．特に磁石（磁化したもの）は近ずけないこと．

B．モーターを隣りどうしで並べて置かないこと．（ローターどうしが接触しないように置くこと．）

C．PGセンサーには，手を触れないこと．

D．フレキを持ってモーターを持ち上げないこと．

2-3-2. Disassembly of the main block (Fig. 2-3)

2－3－2．メインブロックの分解（図2-3 ）

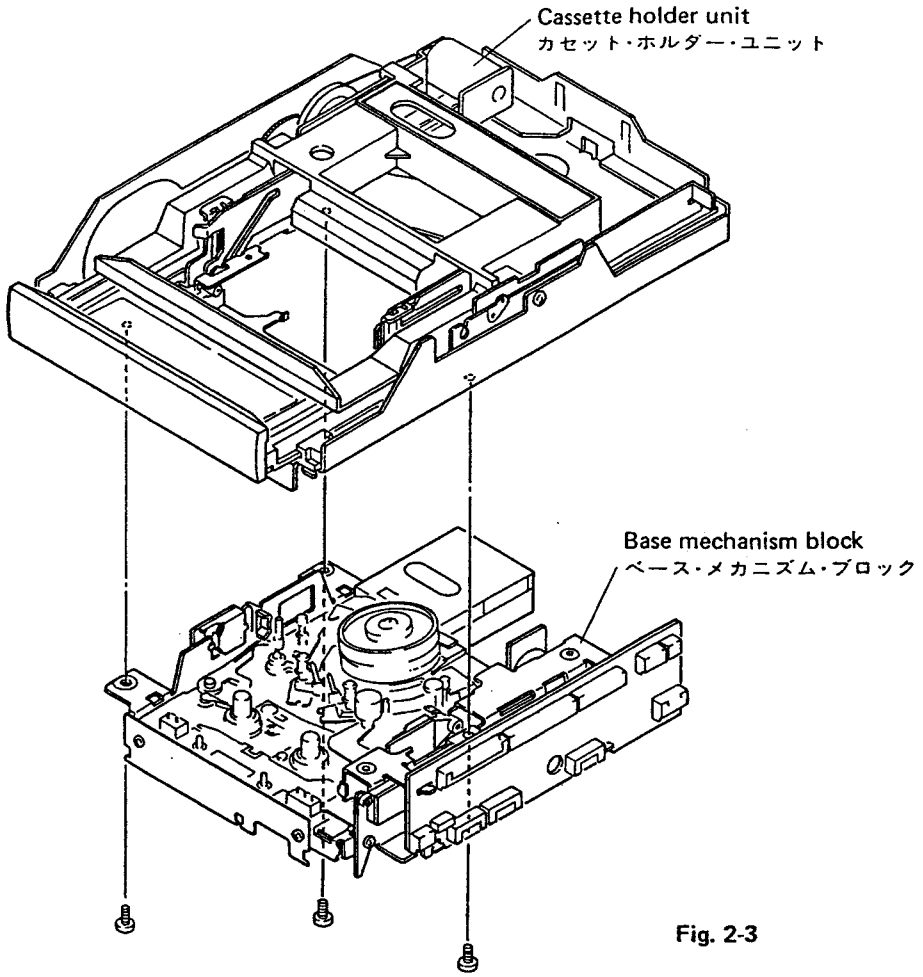


Fig. 2-3

1. Cut wire restraint bands Ⓐ and Ⓑ of the PCB control block (Fig. 2-4) of the loading gear unit, then remove connectors CN5, CN6, and CN12.

1．ローディング・ギア・ユニットのPCB CONTROL BLK（図2-4 ）のⒶ，Ⓑの結束バンドを切り，CN5，CN6，CN12のコネクタを外す．

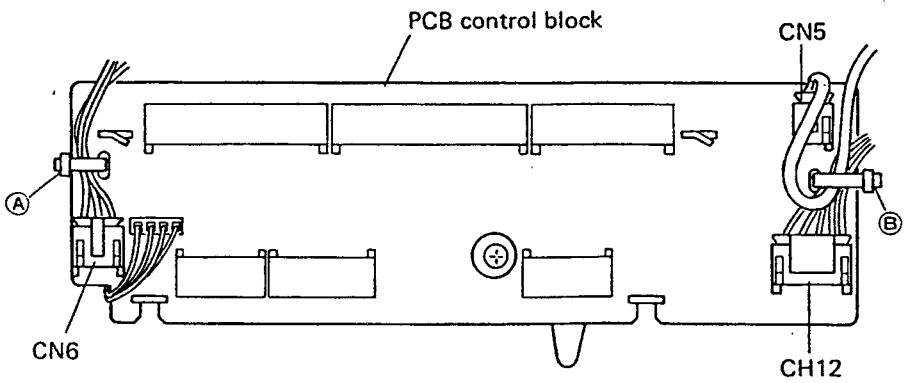


Fig. 2-4

2. Remove the three screws shown in Fig. 2-3, then separate the cassette holder unit from the base mechanism block.

2．図2-3 のネジ3本を外し，カセット・ホルダー・ユニットとベース・メカニズム・ブロックを分離する．

2-3-3. Disassembly of the base mechanism block (Fig. 2-5)　2－3－3．ベース・メカニズム・ブロックの分解

(図2-5)

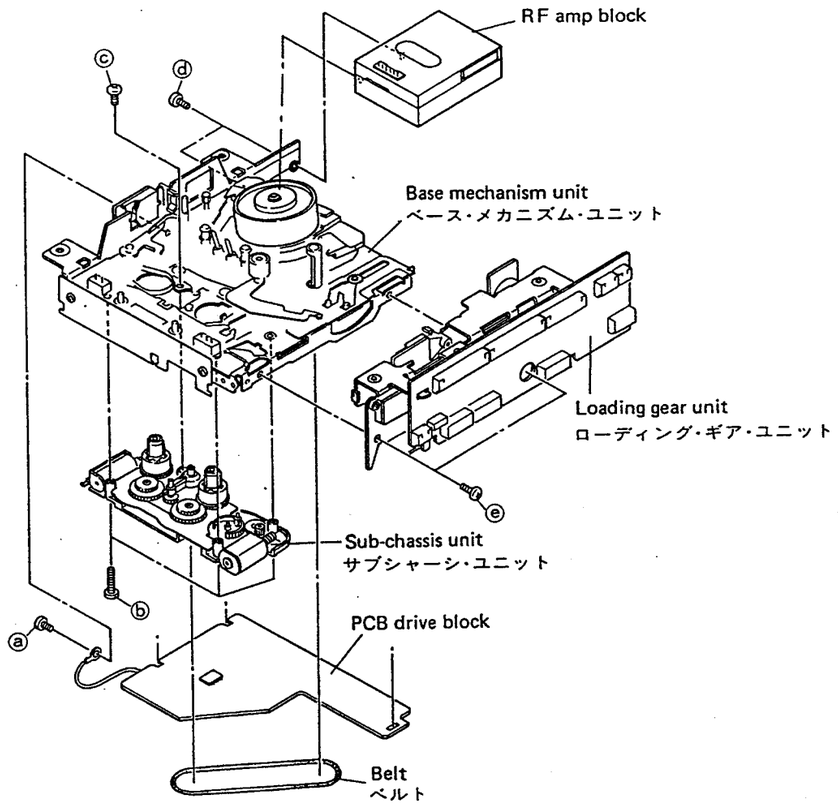


Fig. 2-5

1. Removal of the PCB drive block
   I. Remove the flat ribbon cable and leads of the PCB drive block, then bend the hook back over the hole (on line A) as shown in Fig. 2-6 using pliers.

1．PCB DRIVE BLK の取外し

Ⅰ．PCB DRIVE BLK のフラット・ケーブル及びリード線（図2-6)を外し，図2-6 のフックの曲げをプライヤー等で穴上（A線上）に曲げ戻す．

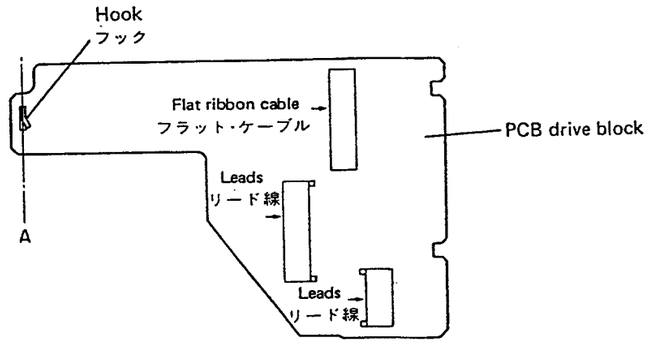


Fig. 2-6

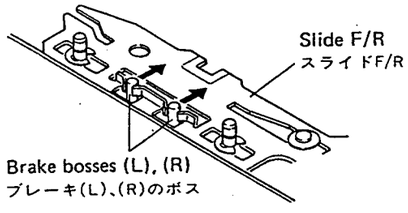


Fig. 2-7

Note: During assembly, feed the hook through the hole, then secure by bending with pliers, etc. The angle of the bend should be such that the PCB drive block does not wobble (approx. 30° to 45°). Do not remove the PCB drive block more than two or three times in view of metal fatigue of the hook.

II. Remove screw ⓐ shown in Fig. 2-5, and remove the PCB drive block.

2. Removal of the belt
   Note: Do not let grease or foreign object adhere to the belt.

3. Removal of the sub-chassis unit
   Remove three screws ⓑ and screw ⓒ shown in Fig. 2-5, then remove the sub-chassis unit.
   Note 1: Since screw ⓒ is a self-tapping screw, pay attention to the removal and tightening torque.
   Note 2: When reinstalling the sub-chassis unit to the base mechanism unit, move the bosses of brakes (L) and (R) shown in Fig. 2-7 in the direction of the arrows.

4. Removal of the RF amp block
   Remove two screws ⓓ shown in Fig. 2-5, then remove the RF amp block.
   Note: Take care not to break the RF cable.

5. Removal of the loading gear unit
   I. Disengage hooks Ⓐ and hook Ⓑ shown in Fig. 2-8, then remove the tape end sensor from side chassis (L).
   II. Remove two screws ⓔ shown in Fig. 2-5, then remove the loading gear unit.
   Note 1: Take care not to break the cables.
   Note 2: When reinstalling the loading gear unit, mate the projections for interlocking shown in Fig. 2-9 with the groove for interlocking in the slider loading block of the base mechanism unit.

注．組立時はフックを穴に通し，プライヤー等で曲げ固定すること．このとき曲げの角度は，PCB DRIVER BLKがガタ付かない程度（約30°～45°）とする．又，PCB DRIVER BLKの取外しは，フックの金属疲労を考慮し2～3回を限度として下さい．

Ⅱ．図2-5 のビスⓐを外して，PCB DRIVE BLK を取外す．

2．ベルトを取外す．

注．ベルトにグリス，異物を付着させないこと．

3．サブ・シャーシー・ユニットの取外し

図2-5 のネジⓑ3本とネジⓒを外し，サブ・シャーシー・ユニットを取外す．

注1．ネジⓒは自らタップを切るタイプなので，取外し，締め付け力には充分注意すること．

注2．サブ・シャーシー・ユニットをベース・メカ・ユニットに組込む際には，図2-7 のブレーキ(L).(R) のボスを矢印方向に動かすこと．

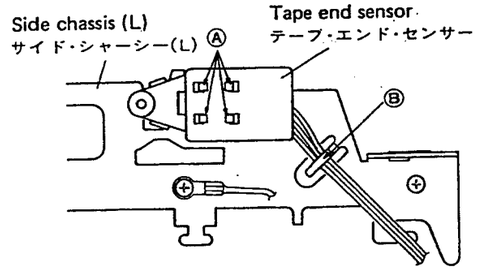


Fig. 2-8

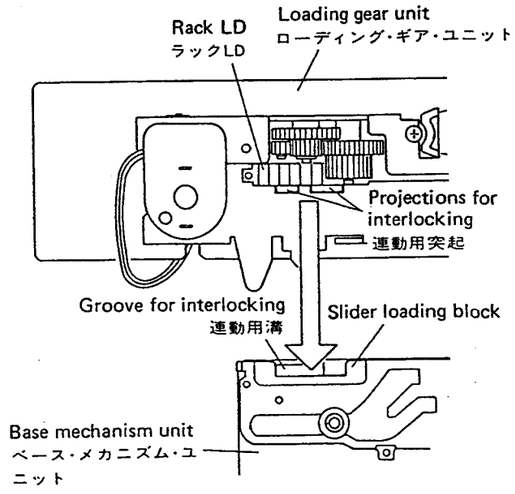


Fig. 2-9

4．RF AMP BLKの取外し

図2-5 のネジⓓ2本を外し，RF AMP BLKを取外す．

注．RFケーブルの断線に注意すること．

5．ローディング・ギア・ユニットの取外し

Ⅰ．図2-8 のフックⒶとフックⒷを外し，テープ・エンド・センサーをサイド・シャーシー(L) より外す．

Ⅱ．図2-5 のネジⓔ2本を外し，ローディング・ギア・ユニットを取外す．

注1．線材の断線に注意すること．

注2．ローディング・ギア・ユニットを組込む際には，図2-9 の連動用突起をベース・メカニズム・ユニットの SLIDER LDG BLK の連動用溝に入れること．

2-4. Disassembly of the base mechanism unit (Fig. 2-10)

2－3－4．ベース・メカニズム・ユニットの分解（図2-10）

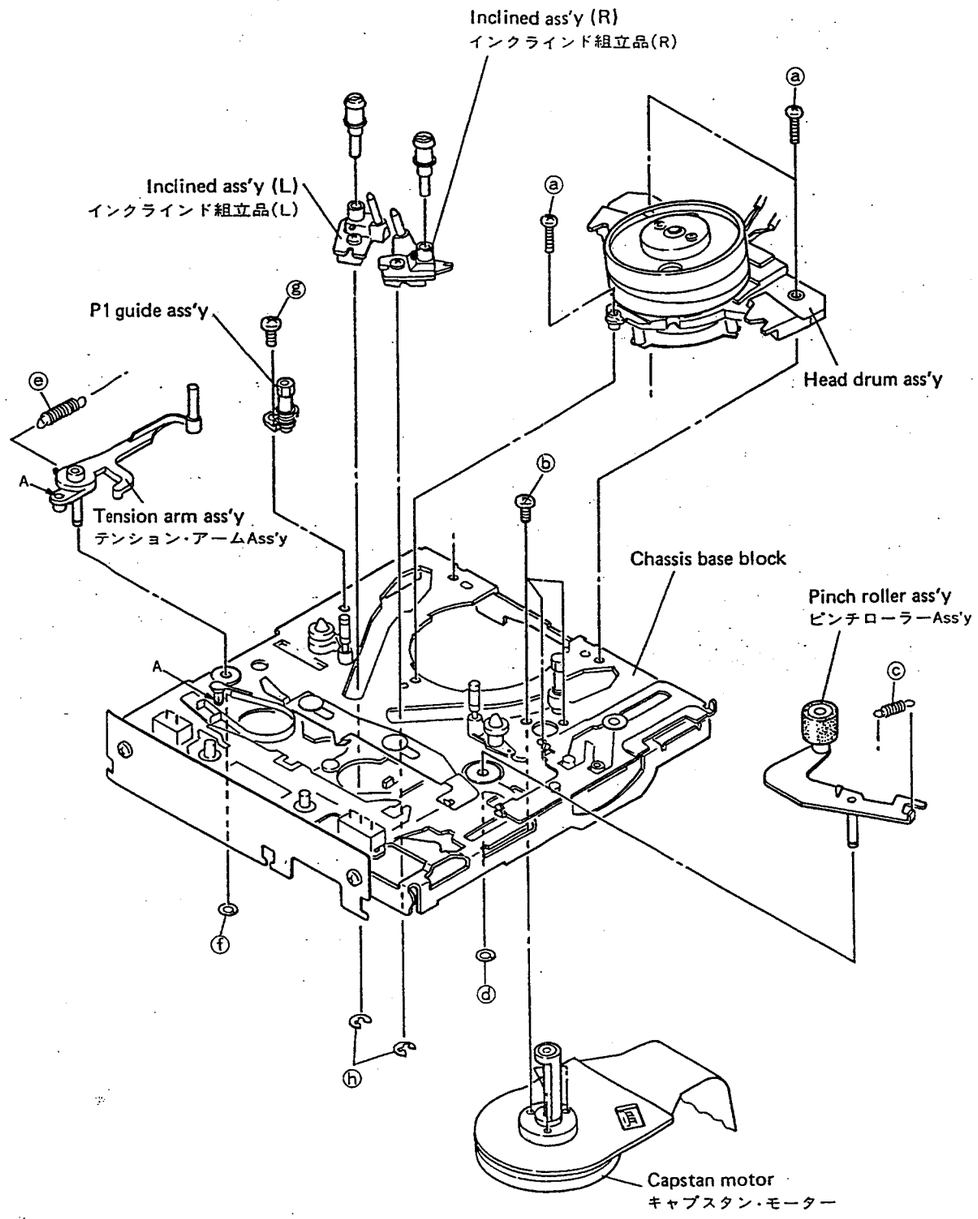


Fig. 2-10

1. Removal of the head drum ass'y
   Remove three screws ⓐ shown in Fig. 2-10, then remove the head drum ass'y.
   Note: Take care not to scratch the head drum. At the same time, when reinstalling the head drum ass'y, the tightening torque of screws ⓐ should be 1 kg·cm.
2. Removal of the capstan motor
   Remove three screws ⓑ shown in Fig. 2-10, then remove the capstan motor.
   Note: When reinstalling the capstan motor, the tightening torque of screws ⓑ should be 1 kg·cm.
3. Removal of the pinch roller ass'y
   I. Remove pinch roller spring ⓒ shown in Fig. 2-10.
   II. Remove washer ⓓ shown in Fig. 2-10, then remove the pinch roller ass'y.
   Note: Take care not to scratch the surface of the pinch roller with which the tape comes into contact.
4. Removal of the tension arm ass'y
   I. Remove spring ⓔ shown in Fig. 2-10.
   II. Disengage portion A and washer ⓕ shown in Fig. 2-10, then remove the tension arm ass'y.
   Note 1: Take care not to scratch the tension band.
   Note 2: Take care not to let grease adhere to the felt portion of the tension band.
   Note 3: Take care not to scratch the posts.
   Note 4: Take care not to apply strain to the tension arm ass'y.
5. Removal of the P1 guide ass'y
   Remove screw ⓖ shown in Fig. 2-10, then remove the P1 guide ass'y.
   Note: Take care not to scratch the surface of the post with which the tape comes into contact.
6. Inclined assemblies (L), and (R)
   Remove E-rings ⓗ shown in Fig. 2-10, then remove inclined assemblies (L) and (R).
   Note 1: Take care not to scratch the surface of the posts with which the tape comes into contact.
   Note 2: When installing inclined ass'y (L), install it so that the TG-R ass'y comes above inclined ass'y (L) as shown in Fig. 2-11.

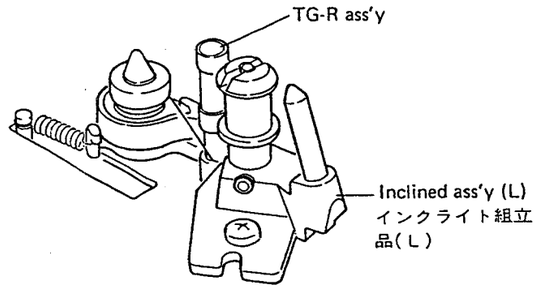


Fig. 2-11

1．CYL Assyの取外し

図2-10のネジⓐ3本を外し，CYL Assyを取外す．

注．シリンダーに傷を付けない様に注意すること．

又，CYL Assyの取付時，ネジⓐの締め付けトルクは 1Kg・cmのこと．

2．キャプスタン・モーターの取外し

図2-10のネジⓑ3本を外し，キャプスタン・モーターを取外す．

注．キャプスタン・モーターの取付時，ネジⓑの締め付けトルクは 1Kg・cmのこと．

3．ピンチ・ローラー Assy の取外し

Ⅰ．図2-10のPローラー・バネⓒを外す．

Ⅱ．図2-10のワッシャーⓓを外し，ピンチ・ローラー Assy を取外す．

注．ピンチ・ローラーのテープ走行面に傷を付けない様に注意すること．

4．テンション・アーム Assy の取外し

Ⅰ．図2-10のバネⓔを外す．

Ⅱ．図2-10のAの部分とワッシャーⓕを外し，テンション・アーム Assy を取外す．

注1．テンション・バンドに傷を付けない様に注意すること．

注2．テンション・バンドのフェルトにグリスが付着しない様に注意すること．

注3．ポストに傷を付けない様に注意すること．

注4．テンション・アーム Assy に歪を与えない様に注意すること．

5．P1 ガイド Assy の取外し

図2-10のネジⓖを外し，P1 ガイド Assy を取外す．

注．ポストのテープ走行面に傷を付けない様に注意すること．

6．インクライインド組立品(L)，(R)

図2-10のEリングⓗを外して，インクライインド組立品(L)，(R) を取外す．

注1．ポストの走行面に傷を付けない様に注意すること．

注2．インクライインド組立品(L) の組込み時，図2-11の様にTG-R Assy がインクライインド組立品(L) の上側にくる様に取り付けること．

2-3-5. Disassembly of the sub-chassis unit (Fig. 2-12)

2－3－5．サブ・シャーシー・ユニットの分解 (図2-12)

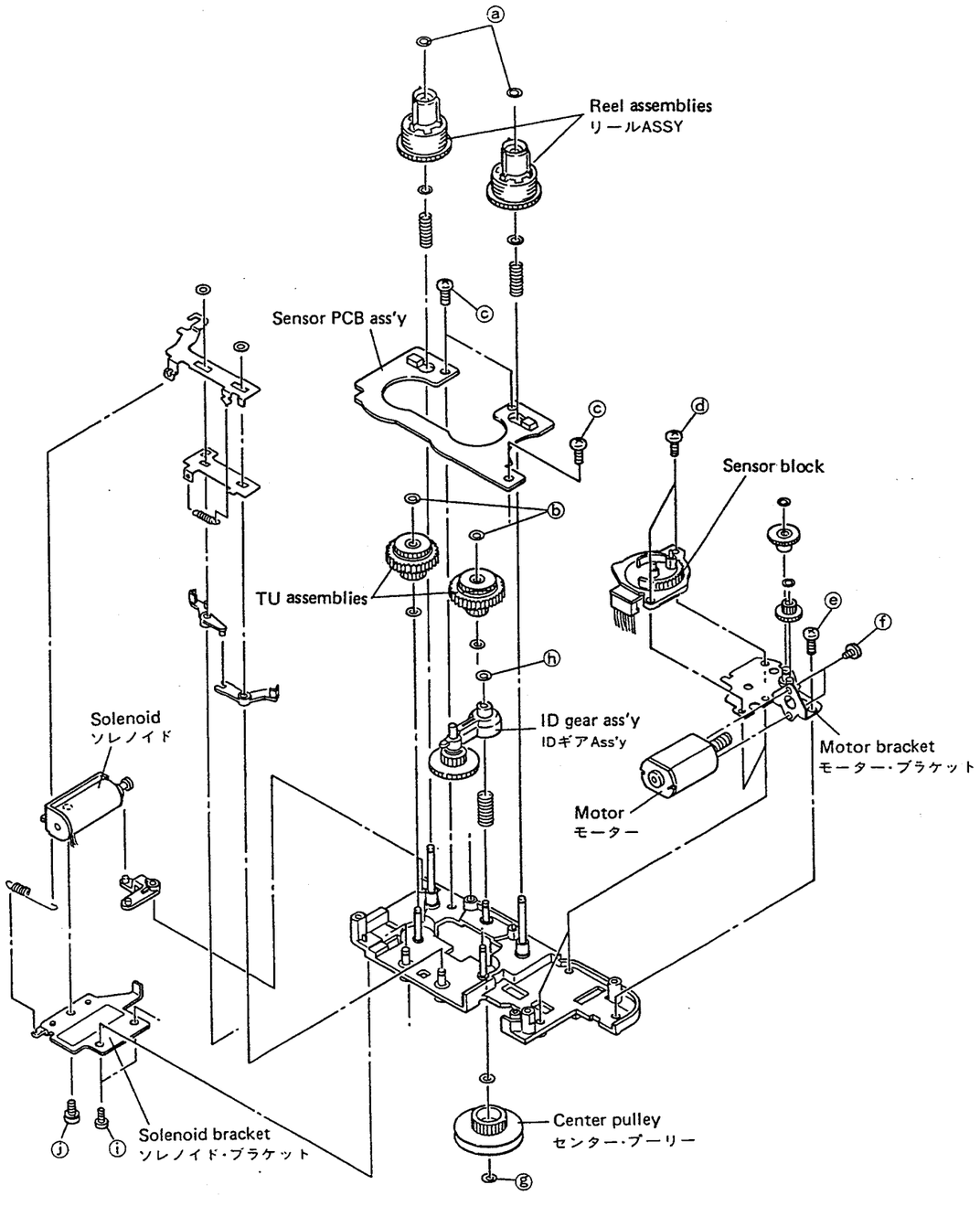


Fig. 2-12

1. Removal of the reel ass'y
   Remove washers ⓐ shown in Fig. 2-12, then remove the reel assemblies.
   Note 1: Take care so that grease does not adhere to the reflector plate of the reel assemblies.
   Note 2: When removing washers ⓐ, be careful not to scratch the reel assemblies.
2. Removal of the TU assemblies.
   Remove washers ⓑ shown in Fig. 2-12, then remove the TU assemblies.
   Note: Be careful not to damage the gears of the TU assemblies.
3. Removal of the sensor PCB ass'y
   Remove three screws ⓒ shown in Fig. 2-12, then remove the sensor PCB ass'y.
   Note: Take care not to let grease adhere to the sensor surface.
4. Removal of the sensor block
   Remove two screws ⓓ shown in Fig. 2-12, then remove the sensor block.
5. Removal of the motor bracket
   Remove screw ⓔ shown in Fig. 2-12, then remove the motor bracket.
   Note: Take care not to damage the gears.
6. Removal of the motor
   Remove two screws ⓕ shown in Fig. 2-12, then remove the motor.
7. Removal of the center pulley
   Remove washer ⓖ shown in Fig. 2-12, then remove the center pulley.
   Note: Take care not to let foreign object get into the metallic parts and do not damage them. Be careful that metallic parts do not come into contact with paper, etc.
8. Removal of the ID gear ass'y
   Remove washer ⓗ shown in Fig. 2-12, then remove the ID gear.
   Note: Take care not to scratch the gear.
9. Removal of the solenoid bracket
   Remove two screws ⓘ shown in Fig. 2-12, then remove the solenoid bracket.
10. Removal of the solenoid
    Remove screw ⓙ shown in Fig. 2-12, then remove the solenoid.
    Note: Be careful not to break the cables.

1．リール Assy の取外し
図2-12のワッシャーⓐを外し，リール Assy を取外す．
注１．リール Assy の反射板にグリスが付着しない様に注意すること．
注２．ワッシャーⓐを外すとき，リール Assy に傷を付けない様に注意すること．

2．ＴＵ Assy の取外し
図2-12のワッシャーⓑを外し，ＴＵ Assy を取外す．
注．ＴＵ Assy のギア部に傷を付けない様に注意すること．

3．SENSOR PCB Assy の取外し
図2-12のネジⓒ３本を外し，SENSOR BCB Assy を取外す．
注．センサー面にグリスが付着しない様に注意すること．

4．SENSOR BLKの取外し
図2-12のネジⓓ２本を外し，SENSOR BLKを取外す．

5．モーター・ブラケットの取外し
図2-12のネジⓔを外し，モーター・ブラケットを取外す．
注．各々のギア部に傷を付けない様に注意すること．

6．モーターの取外し
図2-12のネジⓕ２本を外し，モーターを取外す．

7．センター・プーリーの取外し
図2-12のワッシャーⓖを外し，センター・プーリーを取外す．
注．メタル内に異物混入，傷を付けない様に注意すること．
又，メタル面が紙等に触れないこと．

8．ＩＤギア Assy の取外し
図2-12のワッシャーⓗを外し，ＩＤギアを取外す．
注．ギアに傷を付けない様に注意すること．

9．ソレノイド・ブラケットの取外し
図2-12のネジⓘ２本を外し，ソレノイド・ブラケットを取外す．

10．ソレノイドの取外し
図2-12のネジⓙを外し，ソレノイドを取外す．
注．線材の断線に注意すること．

2-3-6. Disassembly of the loading gear unit (Fig. 2-13)

2－3－6．ローディング・ギア・ユニットの分解
(図2-13)

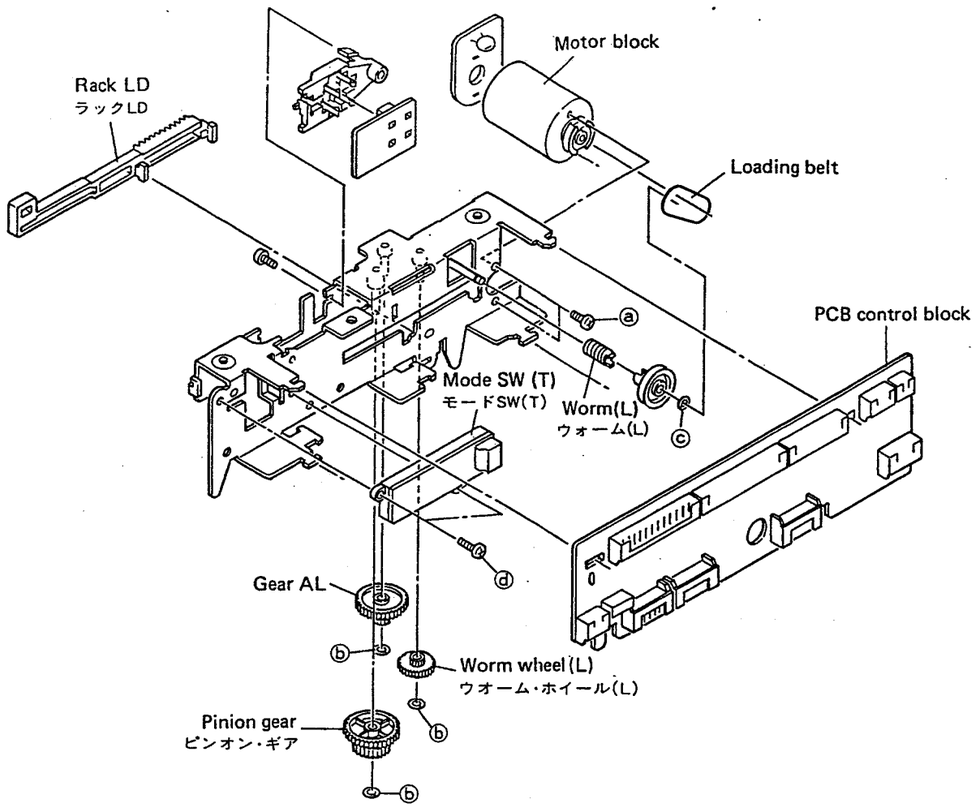


Fig. 2-13

1. Removal of the PCB control block
Bend back the two hooks over the holes (on lines A and B) shown in Fig. 2-14 using the pliers.

1．PCB CONTROL BLK の取外し
図2-14のフック２箇所の曲げをプライヤー等で穴上（A，B線上）に曲げ戻す．

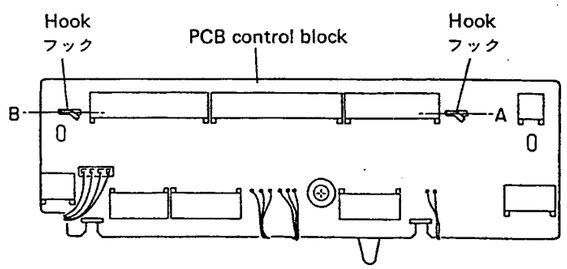


Fig. 2-14

Note: During assembly, feed the hook through the hole, then secure the hook using pliers, etc. by bending it. The angle of bending at this time should be such that the PCB control block does not wobble (approx. 30° to 45°). Do not remove the PCB control block more than two or three times in view of metal fatigue of the hook.

2. Removal of the motor block
I. Remove the loading belt shown in Fig. 2-13.
II. Remove two screws ⓐ shown in Fig. 2-13, then remove the motor block.
Note: Be careful not to let the grease, etc. adhere to the loading belt.

3. Removal of each gear
I. Remove three washers ⓑ and washer ⓒ shown in Fig. 2-13.
II. Referring to Fig. 2-13, remove the gears in the order worm (L), rack LD, pinion gear, gear AL, and worm wheel (L).
Note: Do not let any foreign object adhere to the teeth of the gears. Also be careful not to damage the gears.

4. Removal of the mode SW (T)
Remove two screws ⓓ shown in Fig. 2-13, then remove mode SW (T).
Note: When installing mode SW (T), align the hole in the rack LD with the knob on mode SW (T) (Fig. 2-15).

注．組立時はフックを穴に通し，プライヤー等で曲げて固定すること．このとき曲げの角度は，PCB CONTROL BLK がガタつかない程度（約３０°～４５°）とする．
又，PCB CONTROL BLK の取外しは，フックの金属疲労を考慮し２～３回を限度として下さい．

2．MOTOR BLK の取外し
Ⅰ．図2-13の LDGベルトを外す．
Ⅱ．図2-13のネジⓐ２本を外し，MOTOR BLK を取外す．
注．LDG ベルトにグリス等を付着させないこと．

3．各ギアの取外し
Ⅰ．図2-13のワッシャーⓑ３個とワッシャーⓒを外す．
Ⅱ．図2-13のウォーム(L)，ラックＬＤ，ピンオン・ギア，ギアＡＬ，ウォーム・ホイール(L) の順で各ギアを取外す．
注．ギアの歯先に異物を付着させないこと．
又，ギアに傷を付けない様に注意すること．

4．モードＳＷ(T) の取外し
図2-13のネジⓓ２本を外し，モードＳＷ(T) を取外す．
注．モードＳＷ(T) の組立時，ラックＬＤの穴とモードＳＷ(T) のノブの位置を合せる．（図2-15）

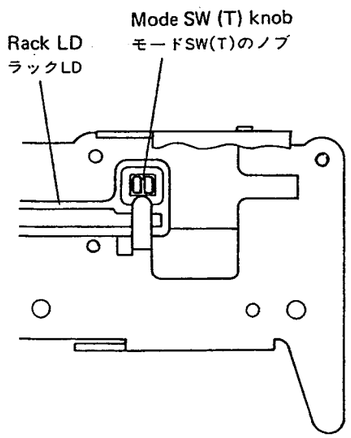


Fig. 2-15

2-3-7. Disassembly of the cassette holder unit (Fig. 2-16)

2－3－7．カセット・ホルダー・ユニットの分解（図2-16）

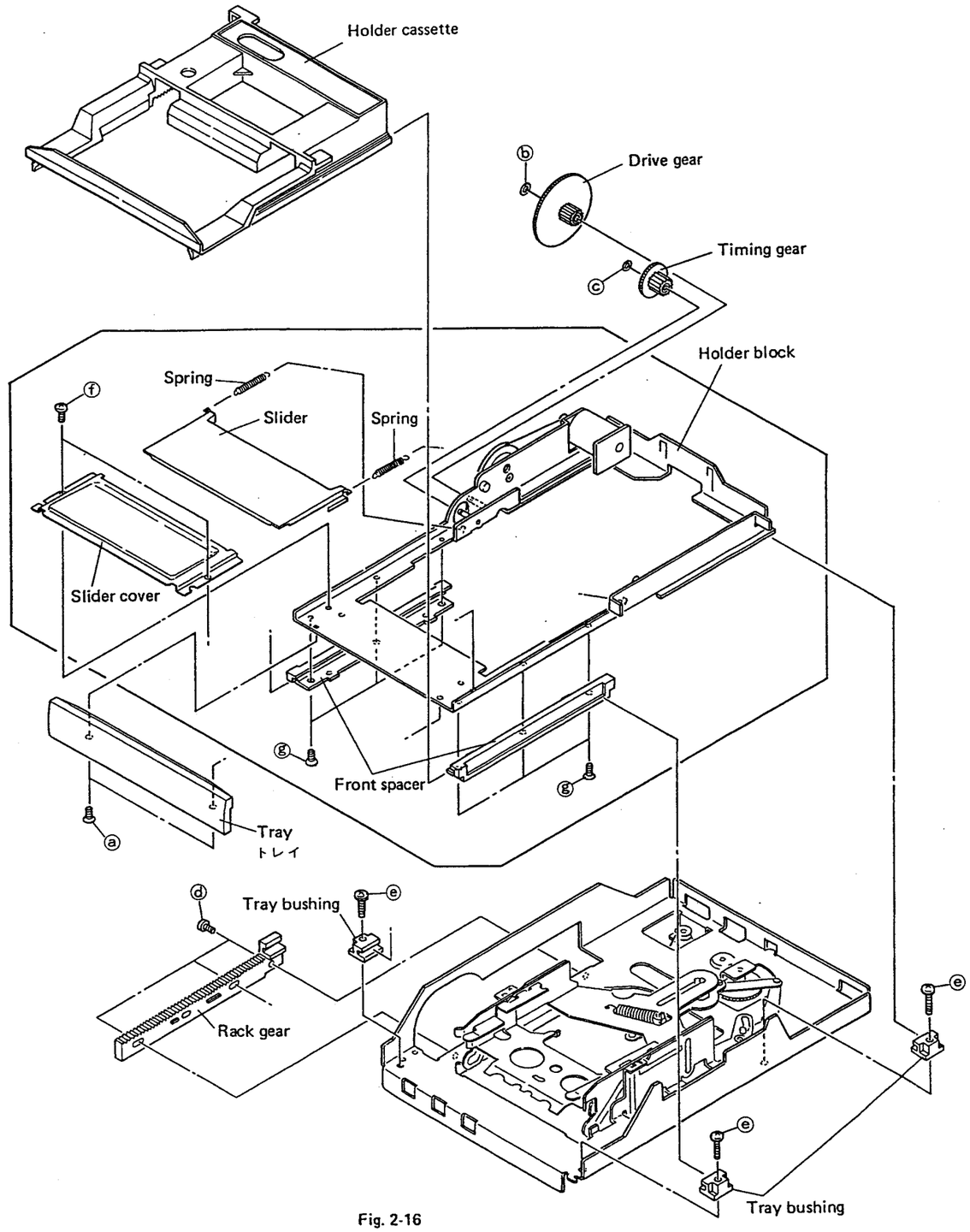


Fig. 2-16

1. Removal of the holder cassette
   I. Remove two screws ⓐ shown in Fig. 2-16, then remove the tray.
   II. Remove washers ⓑ and ⓒ shown in Fig. 2-16, then remove the drive gear and timing gear.
   III. Remove the holder cassette shown in Fig. 2-16 by sliding it forward.
   Note 1: Handle the holder cassette with care so that it is not damaged, dented, etc.
   Note 2: When reinstalling the holder cassette, pull out the holder block fully forward (direction A in Fig. 2-17), then reinstall the timing gear with the front of the holder cassette positioned in accordance with the dimension (1.9 ± 0.4mm) given in Fig. 2-17.

1．HOLDER CASSETTE の取外し
   Ⅰ．図2-16のネジⓐ2本を外し，トレイを取外す．
   Ⅱ．図2-16のワッシャーⓑ，ⓒを外し，DRIVE GEAR，TIMING GEAR を取外す．
   Ⅲ．図2-16のHOLDER CASSETTE を前面にスライドさせて取外す．
   注1．HOLDER CASSETTE に傷，打痕等を付けない様に取扱いを注意すること．
   注2．HOLDER CASSETTE 組み込み時は，HOLDER BLKを前面に完全に引出し（図2-17　A方向），HOLDER CASSETTE 前面を図2-17の寸法(1.9±0.4㎜)に合せた状態で TIMING GEARを組み込むこと．

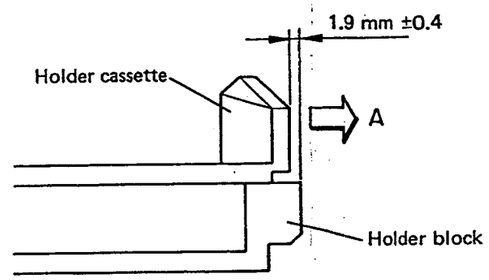


Fig. 2-17

2. Removal of the holder block
   I. Remove three screws ⓓ shown in Fig. 2-16, then remove the rack gear.
   II. Remove three screws ⓔ shown in Fig. 2-16, then remove three tray bushings.
   III. Remove the holder block shown in Fig. 2-16.
3. Removal of the slider
   I. Remove two springs shown in Fig. 2-16
   II. Remove two screws ⓕ shown in Fig. 2-16, then remove the slider cover.
   III. Remove six screws ⓖ shown in Fig. 2-16, then remove two front spacers.
   IV. Remove the slider shown in Fig. 2-16.
   Note: Handle the slider with care so that it is not damaged, dented, etc.

2．HOLDER BLKの取外し
   Ⅰ．図2-16のネジⓓ3本を外し，RACK GEAR を取外す．
   Ⅱ．図2-16のネジⓔ3本を外し，TRAY BUSHING 3個を取外す．
   Ⅲ．図2-16のHOLDER BLKを取外す．
3．SLIDERの取外し
   Ⅰ．図2-16のスプリング2本を外す．
   Ⅱ．図2-16のネジⓕ2本を外し，SLIDER COVERを取外す．
   Ⅲ．図2-16のネジⓖ6本を外し，FRONT SPACER 2個を取外す．
   Ⅳ．図2-16のSLIDERを取外す．
   注．SLIDERに傷，打痕等を付けない様に取扱いを注意すること．

2-3-8. Disassembly of the holder base block (Fig. 2-18)

2－3－8．HOLDER BASE BLK の分解（図2-18）

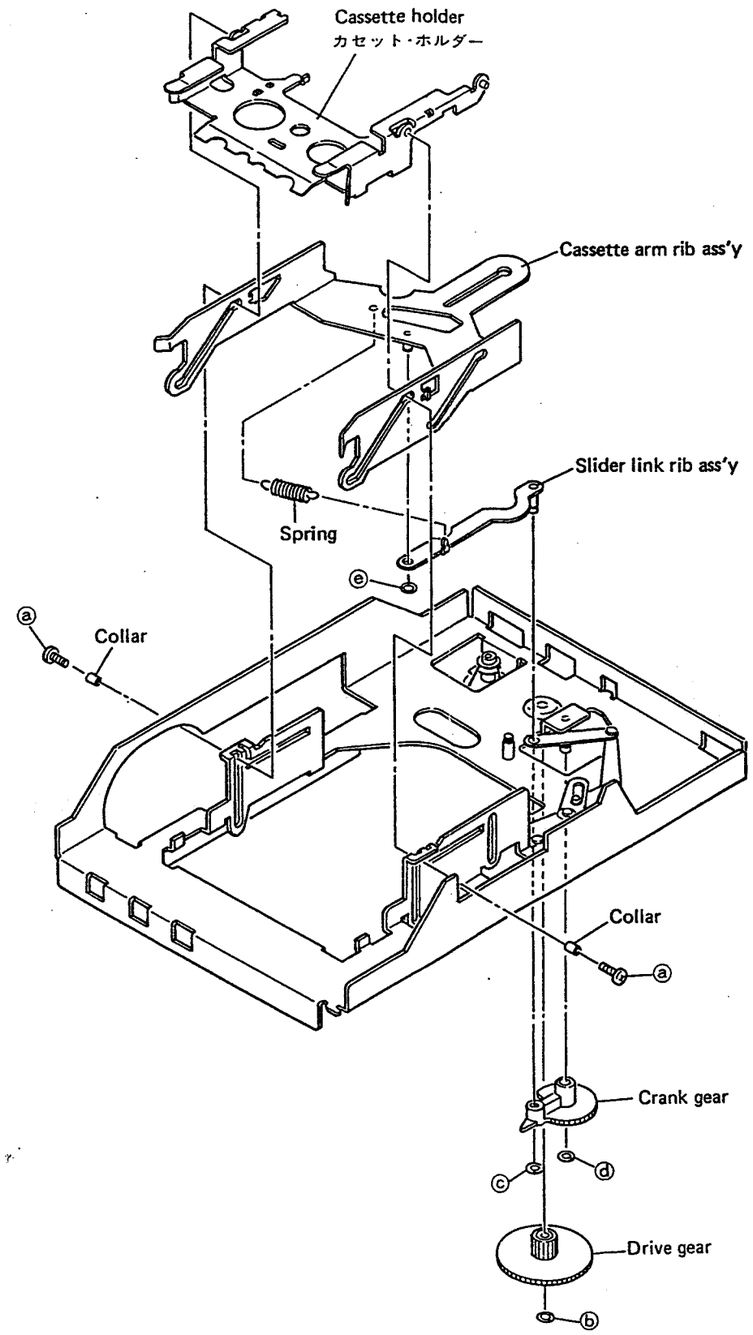


Fig. 2-18

1. Removal of the cassette holder
   I. Remove two screws ⓐ and two collars shown in Fig. 2-18.
   II. Slide the cassette arm rib ass'y shown in Fig. 2-18 backward by approx. 15cm, then remove the cassette holder.
2. Removal of the cassette arm rib ass'y and slider link rib ass'y.
   I. Remove the spring shown in Fig. 2-18.
   II. Remove washer ⓑ shown in Fig. 2-18, then remove the drive gear.
   III. Remove washers ⓒ and ⓓ shown in Fig. 2-18, then remove the crank gear.
   IV. Remove washer ⓔ shown in Fig. 2-18, then remove the cassette arm rib ass'y and slider link rib ass'y.

1．カセット・ホルダーの取外し

Ⅰ．図2-18のネジⓐ2本とCOLLAR2個を外す．

Ⅱ．図2-18のCASSETTE ARM RIV Assy を後方へ約15cm程度スライドさせて，カセット・ホルダーを取外す．

2．CASSETTE ARM RIV Assy とSLIDER LINK RIV Assyの取外し

Ⅰ．図2-18の SPRING を外す．

Ⅱ．図2-18のワッシャーⓑを外し，DRIVE GEARを取外す．

Ⅲ．図2-18のワッシャーⓒとワッシャーⓓを外し，CRANK GEARを取外す．

Ⅳ．図2-18のワッシャーⓔを外し，CASSETTE ARM RIV Assy とSLIDER LINK RIV Assyを取外す．

This adjustment is performed when mechanical parts have been replaced or when torque value is adjusted or tape travel is erratic.

この調整は，機構部品を交換したときまたはトルク値，テープの走りが悪い場合に行ないます。

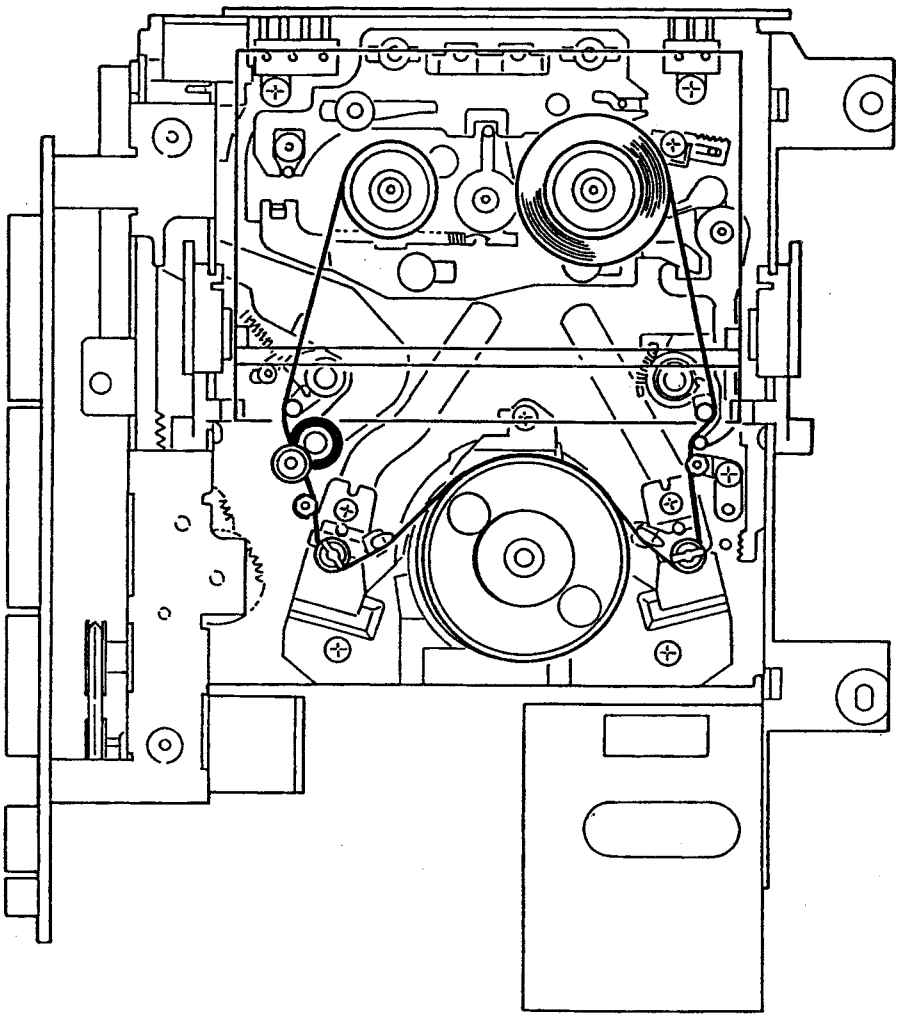


Fig. 3-1 Tape travel path
テープ走行経路

3-1. Back Tension Torque Adjustment

1. When reinstalling the mechanism ass'y into the main body, perform coarse adjustment of the top of the guide roller. Here, for temporary adjustment, loosen the setscrew shown in Fig. 3-2, then turn the screw on top of the guide roller using the wrench so that the guide roller shaft is flush with the surface indicated by the arrow.
   After adjustment is complete, gently tighten the setscrew. At this time, confirm that the guide roller can rotate with minimum friction.

3－1．バック・テンション・トルク調整

1．メカニズム Assy を本体に組み込む際，ガイド・ローラーの上規制を粗調整する．
ここでは仮調整なので，目安としてガイド・ローラーのシャフトが図3-2 の矢印の線上で面一となる様に，図3-2 のイモネジをゆるめてガイド・ローラー頭部のネジを二股レンチにより回して調整する．
調整後，イモネジを軽く締める．このとき，ガイド・ローラーが少し抵抗を持ちながら回転することを確認する．

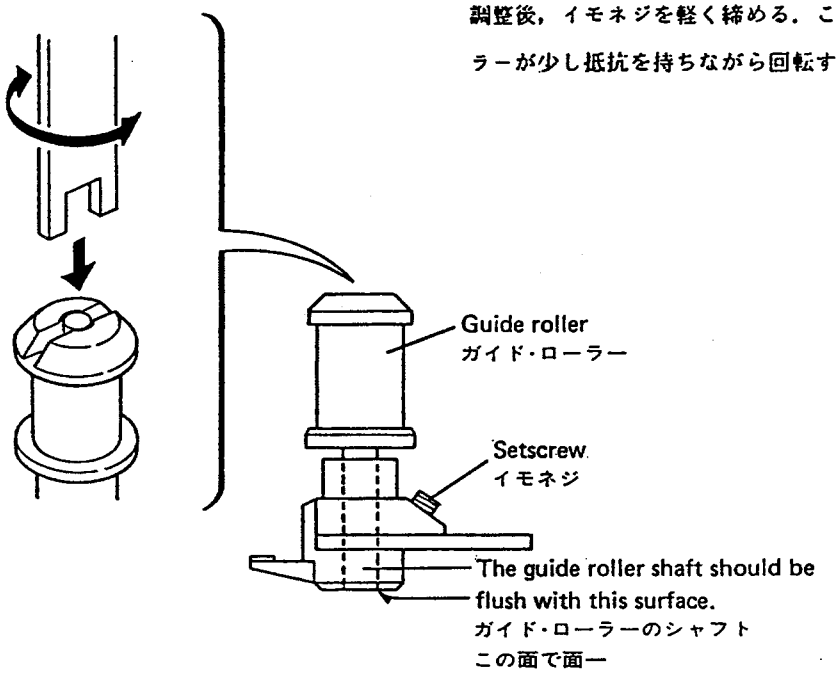


Fig. 3-2

2. Install the mechanism ass'y into the main body.
3. Perform coarse adjustment of bottoms of the P1 and P2 posts. Here, since temporary adjustment is made, turn the top of the P1 and P2 posts using the hexagonal wrench so that the shafts of the posts protrude by about 1mm as shown in Fig. 3-3.

2．メカニズム Assy を本体に取り付ける．
3．P1 ポスト，P2 ポストの下規制を粗調整する．
ここでは仮調整なので，目安として図3-3 の様にP1 ポスト，P2 ポストのシャフトが上に1mm ぐらい出る様にP1，P2 ポストの頭を六角レンチにより調整する．

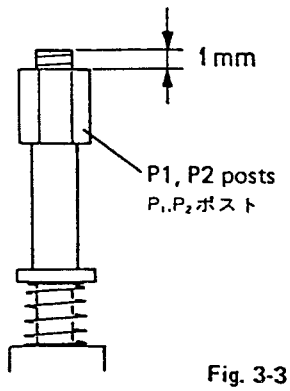


Fig. 3-3

4. Load a tape, then let it run in the PLAY mode; referring to Fig. 3-4, the tension post should be positioned on the perpendicular line Y plotted below from the surface where the tape comes into contact with the P1 post or is positioned slightly within Y (at this time, see that the tape is wrapped around the P1 post), loosen screw (a), then adjust by moving molded part A to the right and left. After adjustment is complete, tighten screw (a).

4．テープを装着しＰＬＡＹモードで走らせ，図3-4 の様に，テンション・ポストがＰ1 ポストのテープ接触面から下方向に引いた垂線Ｙ上または，内側に若干入り込む（このときは，Ｐ1 ポストにテープがラップしていること）位置にくる様に，図3-4 のネジⓐをゆるめて成型品Ａを左右に動かし調整する．調整後，ネジⓐを締める．

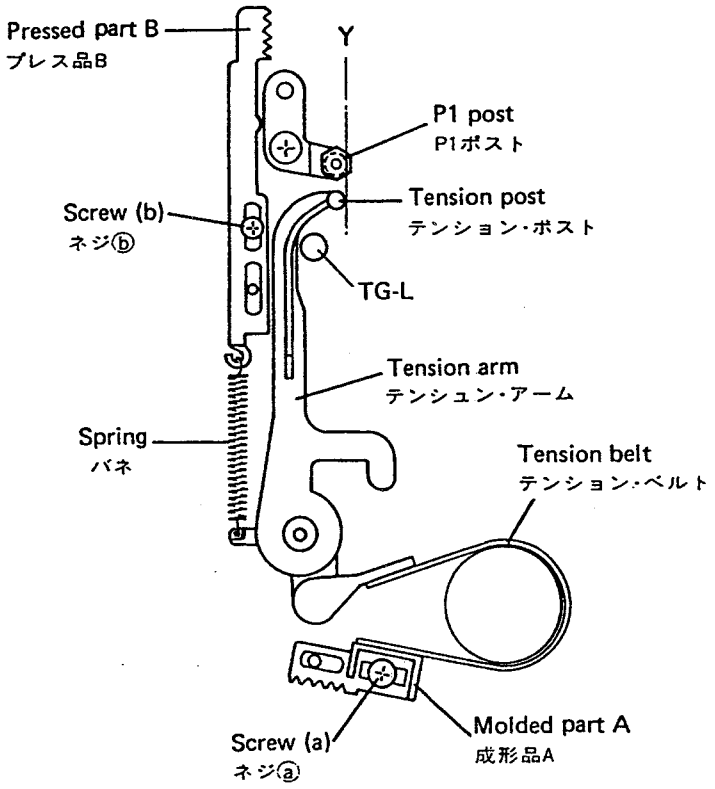


Fig. 3-4

Note: When adjusting molded part A, manually turn the drive gear (Fig. 2-18) to elevate the cassette holder, then, move the cassette holder to the upper edge and adjust screw (a) through the cassette holder hole through which the reel ass'y comes out.

注）．成型品Ａを調整するときは，カセット・ホルダー昇降用ギア(DRIVE GEAR)（図2-18）を手動で回し，カセット・ホルダーを上端に移動させ，リール ASSY の出るカセット・ホルダーの穴からネジⓐを調整して下さい．

5. Load the torque measuring tape (TW-7111 manufactured by SONY), and measure the back tension torque in the REC/PLAY mode. At this time, loosen screw (b) shown in Fig. 3-4, then adjust the position of pressed part B so that the center of the reading of the back tension torque value is 6.5 to 8.5 g.cm. After adjustment is complete, tighten screw (b).
Adjust pressed part B using the regular screwdriver which is inserted through the hole shown in Fig. 3-5.

5．トルク測定用テープ(SONY 製 TW-7111) を装着し，REC/PLAYモードにてバック・テンション・トルクを測定する．
このとき，バック・テンション・トルク値の振れ幅の中心が 6.5～8.5g・cmになる様に，図3-4 のネジⓑをゆるめてプレス品Bの位置を調整する．プレス品Bは，図3-5 の穴からマイナス・ドライバーを入れて調整して下さい．調整後，ネジⓑを締める．

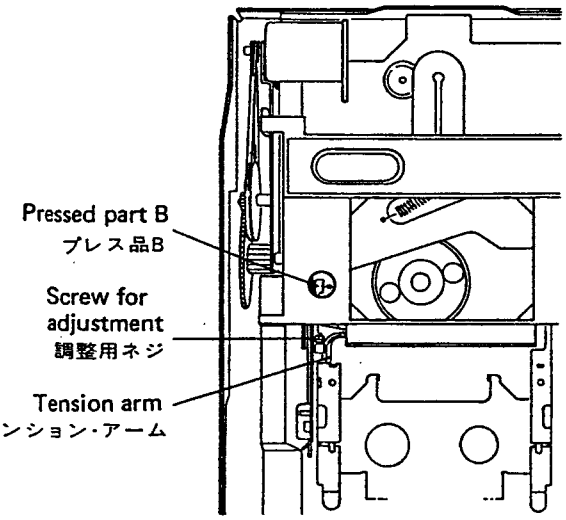


Fig. 3-5

Note: At this time, the tape should be wrapped around the P1 post, tension post and TG-L.

注．このとき，P1 ポスト，テンション・ポスト，TG－L にラップしていること．

6. While adjusting the position of pressed part B, if the torque value does not fall within 6.5 to 8.5 g.cm, move molded part A again to the right and left; then after that, adjust the position of pressed part B.

6．プレス品Bの調整で，規格の 6.5～8.5g・cmに入らない場合は，再度成型品Aを左右に動かし，その後プレス品Bの位置を調整する．

3-2. Tape Travel Adjustment

3－2．テープ走行調整

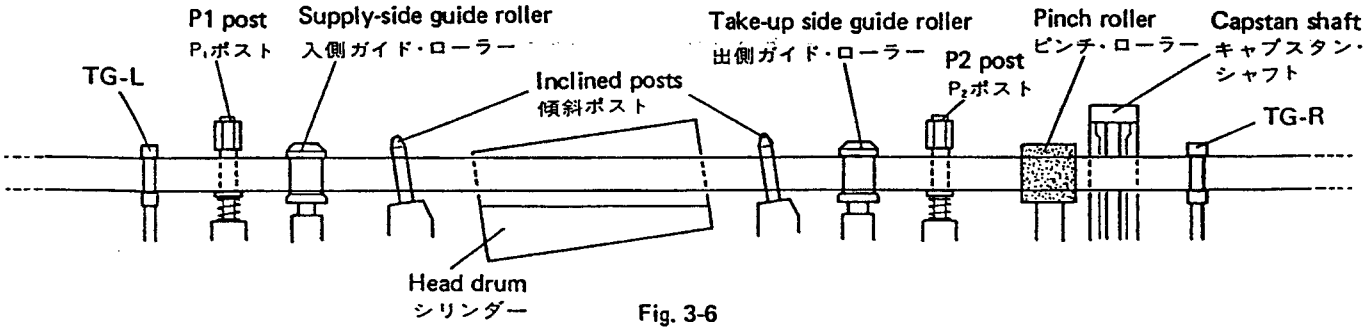


Fig. 3-6

Prior to adjustment, clean dirt or dust off all posts and the head drum other than the guide roller using a cotton swab moistened with Diflon.
Gently wipe the guide roller with a cotton swab moistened with alcohol.

調整の前にガイド・ローラー以外の各走行ポスト及びシリンダーの汚れを，ダイフロンを綿棒に浸し拭きとって下さい．
尚，ガイド・ローラーはアルコールを綿棒に浸し，軽く拭きとって下さい．

1. Load the tape travel adjustment tape (TY-7251 manufactured by SONY), then let it run in the PLAY mode.
2. From the position where the heads of the P1 and P2 posts are coarse-adjusted using the hexagonal wrench described in 3-1 (back tension torque adjustment), rotate these by one turn clockwise to disengage lower adjustment.
3. Connect CH1 of the oscilloscope to TP412 (ENV) on the digital PCB and CH2 to TP407 (SWH) (Fig. 4-1), then adjust the height of the guide roller while observing the envelope of the RF signal.
4. Adjustment methods
   I. Turn the screw on top of the supply-side guide roller clockwise using the wrench and adjust so that the envelope of the supply side has a parallel section (Fig. 3-7).

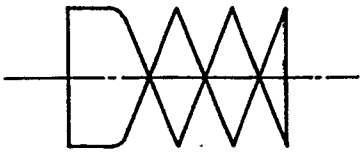


Fig. 3-7

   II. Try turning the screw on top of the take-up side guide roller clockwise and counterclockwise to eliminate narrowing of the envelope (Fig. 3-8).

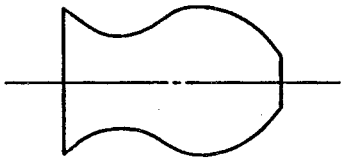


Fig. 3-8

   III. Gently turn both guide rollers alternately clockwise so that the envelope has the shape shown in Fig. 3-9. At this time, the lower edge of the tape should be fully on the drum lead.

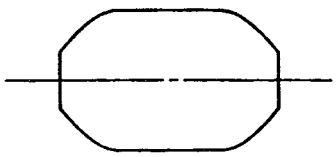


Fig. 3-9

1．走行調整用テープ(SONY 製 TY-7251) を装着し，ＰＬＡＹモードで走らせる．

2．Ｐ１，Ｐ２ ポストの頭を六角レンチにて，３－１項（バック・テンション・トルク調整）で粗調整した位置から１回転ぐらい時計方向に回して下規制を外す．

3．オシロスコープのCH1 をデジタルＰＣＢの TP412(ENV) に，CH2 をTP407(SWH)（図4-1 ）に接続し，ＲＦ信号のエンベロープを観測しながら，ガイド・ローラーの高さを調整する．

4．調整方法

Ⅰ．入側ガイド・ローラーの頭部のネジを二股レンチにより右に回し，エンベロープの入側に平行部が発生する様に調整する．（図3-7 ）

Ⅱ．出側ガイド・ローラーの頭部のネジを左右に回してみて，エンベロープのクロス・トラックを無くす様にする．（図3-8 ）

Ⅲ．両側のガイド・ローラーを少しずつ互いに右に回し，エンベロープを図3-9 の様な形状にする．
このとき，テープの下エッジがシリンダーのリードに完全に乗っている状態になります．

IV. Gently turn the screws on tops of both guide rollers alternately counterclockwise so that the envelope has the shape shown in Fig. 3-10. The shape of the envelope when the tape is running outside the drum lead is shown in Fig. 3-11.

Ⅳ. 両側のガイド・ローラーの頭部のネジを少しずつ互いに左に回し，エンベロープを図3-10の様な形状にする．テープがシリンダーのリードから外れて走行している場合のエンベロープの形状は，図3-11の様になります．

Fig. 3-10

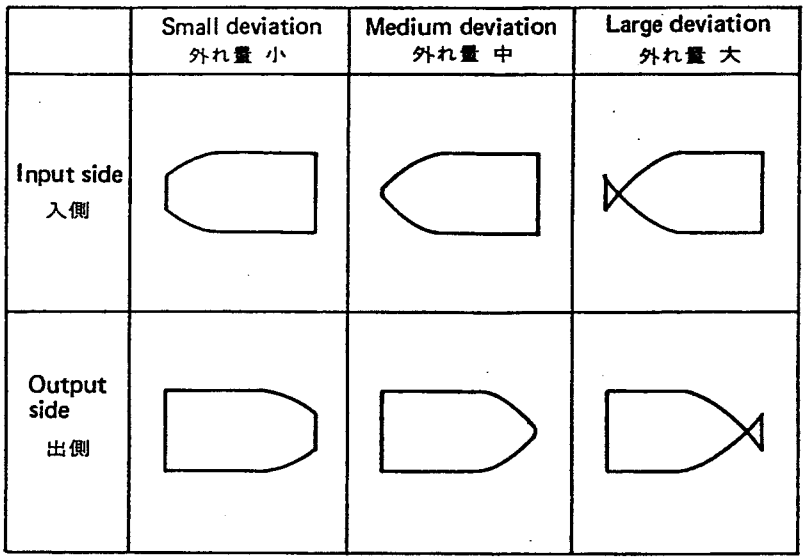


Fig. 3-11

V. After the adjustment of the guide rollers is complete, tighten the setscrews (Fig. 3-2) securing the guide rollers using the hexagonal wrench. (The tightening torque should be 1 kg.cm.)

5. After the adjustment is complete, eject the tape, then load it again and confirm whether or not the envelope is as shown in Fig. 3-10. If it isn't, go back to 4, then perform adjustment again.
6. After adjustment is complete, check to make sure the tape is not curled around the guide rollers.
7. Turn the heads of the P1 and P2 posts counterclockwise using the hexagonal wrench, and adjust so that the lower edge of the tape is positioned correctly when the tape is running. Adjust so that the tape is seen to run along the post flange. At this time, see that the tape is free from curling.

Ⅴ．ガイド・ローラーの調整後，六角レンチにてガイド・ローラーを固定しているイモネジ（図3-2 ）を締める．（締め付けトルクは， 1Kg・cmのこと）

5．調整後，一度ＥＪＥＣＴし，再度ローディングを行いエンベロープが，図3-10の様な形状になっているかを確認する．なっていない場合は，再度４項に戻って調整する．

6．調整終了後，ガイド・ローラーでテープがカールしていないことを確認する．

7．Ｐ1 ，Ｐ2 ポストの頭を六角レンチにて左に回し，テープを下規制させる．

調整は，目視で行いポスト・フランジにテープを沿わせる様にする．このとき，テープのカールがない様に注意すること．

4. ELECTRICAL ADJUSTMENTS
電気系調整

***Measuring conditions**

1. Environment
   There should be no draft.
   Temperature: 5 to 35°C
   Humidity: 30 to 90%
2. Supply voltage
   ± 2.5% of the rating
3. Line frequency
   50 (60) Hz ±1%
4. Ambient illumination and noise
   400 lux or more, 40 phons or less

***Definition**

1. 0 dBV is equal to 1.0 V.
2. The output impedance is 10 kilohm unless otherwise noted.
3. The reference playback output refers to a LINE OUTPUT of 2.0 ±0.5 V when PGM NO. [1] (1 kH, 0 dBV) of the test tape TY-7551 is played back.
4. The reference recording input/output refers to a LINE OUTPUT of 2.0 ±0.5 V immediately before the OVER of the level meter lights with the INPUT LEVEL volume adjusted when the test tape TY-30B is loaded and the unit is set to the recording monitor mode (the REC button is pressed) with a signal level of 2.0 V (+6 dBV) being input from the LINE IN.

＊測定条件

1．環境	周囲無風　温度　5 ～35℃ 湿度 30 ～90%
2．電源電圧	定格値の±2.5%
3．電源周波数	50(60Hz)±1%
4．周囲照明と騒音	400lux以上，40ホーン以下

＊定義

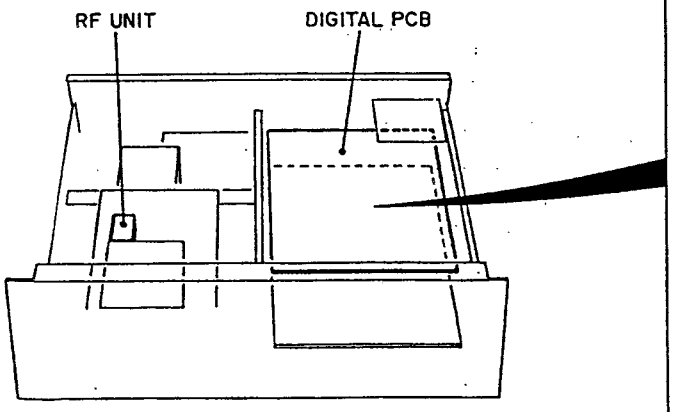
1．0dBV-1.0V とする．
2．出力インピーダンスは注記の無い限り 10KΩ とする．
3．再生基準出力状態とは，テスト・テープ TY-7551の PGM NO.『1』(1KHz.0dBV) を再生し，LINE OUTPUT が2.0 ±0.5Vの状態をいう．
4．録音基準入出力状態とは，テスト・テープ TY-30B を装着しREC モニター(RECボタンのを押す) 状態のとき，LINE IN より 2.0V(+6dBV)を入力し INPUT LEVELボリュームを調整し，レベルメーターの『OVER』点灯直前の LINE OUTPUTが 2.0±0.5Vの状態いう．

4-1. Adjustment of the Servo System

***PCB to be adjusted: Digital PCB (Fig. 4-1)**

4－1．サーボ系調整

＊調整ＰＣＢ　：　デジタルＰＣＢ（図４－１）



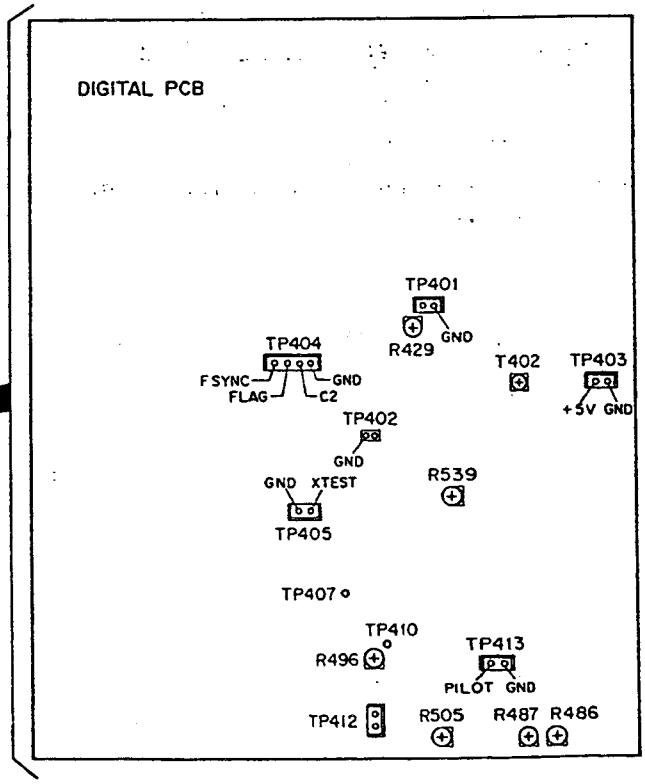


Fig. 4-1 Adjustment of the servo system and test point locations

サーボ系調整とテスト・ポイント位置

1. Details of each TP terminal

- TP401 No. 1 PL free-running frequency output terminal
  No. 2 GND
- TP402 No. 1 PLL shorting terminal — shorted to ground when the PLL free-running frequency is adjusted.
  No.2 GND
- TP403 No. 1 +5V — + power supply of error rate counter
  No. 2 GND — GND of error rate counter
- TP404 No. 1 FSYNC — frame sync signal output terminal
  No. 2 FLAG — error correction flag output terminal
  No. 3 C2 — C correction error output terminal
  No. 4 GND
- TP405 No. 1 XTEST — TEST terminal (shorted to GND during testing)
  No. 2 GND
- TP407 SWH — switching pulse output terminal
- TP410 ENV OUT — envelope output terminal
- TP412 No. 1 ENV — envelope output terminal
  No. 2 GND
- TP413 No. 1 PILOT — ATF pilot signal output terminal
  No. 2 GND

1．各ＴＰ端子の内容

- TP401 NO.1 PLL 自走周波数出力端子
  NO.2 GND
- TP402 NO.1 PLL ショート端子--- PLL 自走周波数調整時 GNDに落す.
  NO.2 GND
- TP403 NO.1 +5V---エラーレート・カウンター+ 電源
  NO.2 GND---エラーレート・カウンター GND
- TP404 NO.1 FSYNC---フレーム同期信号出力端子
  NO.2 FLAG ---エラー訂正フラグ出力端子
  NO.3 C2 ---C 訂正エラー出力端子
  NO.4 GND
- TP405 NO.1 XTEST---TEST端子(TEST 時 GNDに落す)
  NO.2 GND
- TP407 SWH---スイッチング・パルス出力端子
- TP410 ENV OUT---エンベロープ出力端子
- TP412 NO.1 ENV---エンベロープ出力端子
  NO.2 GND
- TP413 NO.1 PILOT---ATF パイロット信号出力端子
  NO.2 GND

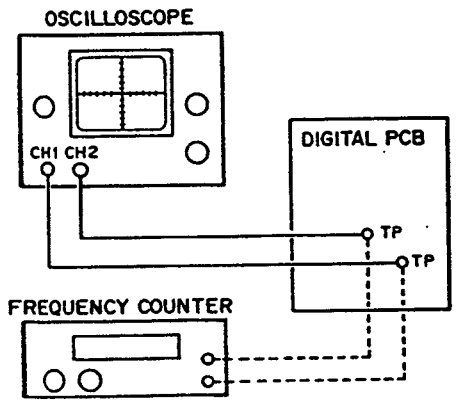


Fig. 4-2 Connection of test points for measurement
各端子の測定

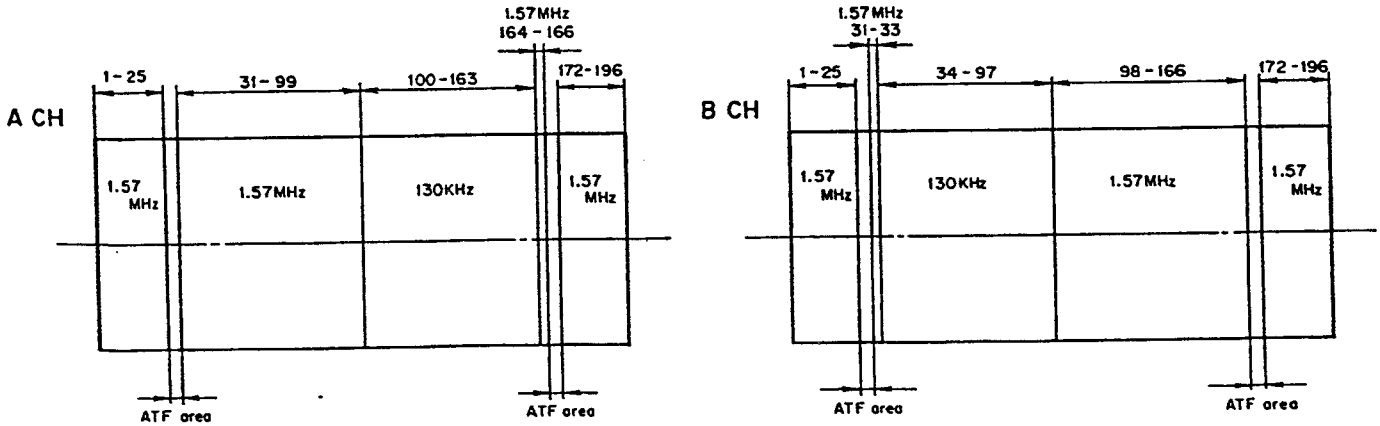


Fig. 4-3 Frequency patterns of the level checking test tape (TY-7111)
レベル用テープ(TY-7111)周波数パターン

2. Test tape

1) Torque cassette
   - TW-7131 manufactured by SONY
   - TW-7232A manufactured by SONY
2) Tracking
   - TY-7251 manufactured by SONY
3) Level
   - TY-7111 manufactured by SONY
4) Function
   - TY-7551 manufactured by SONY
5) Blank tape
   - TY-30B manufactured by SONY or equivalent

3. Adjustment of the take-up torque during unloading

1) Load the torque cassette TW-7231A.
2) Press the OPEN/CLOSE button, then adjust semi-fixed resistor R539 so that the torque of the supply side reel is 30 to 40 g.cm the instant the unloading state is entered.

4. Checking the FF/REW torque

1) Short TP405 PIN1 (XTEST) to ground (short TP405 using the shorting pin).
2) Load the torque cassette TW-7231A.
3) When the unit is set to the FF mode, check that the torque of the take-up reel is 60 g.cm or more.
4) When the unit is set to the REW mode, check that the torque of the supply reel is 60 g.cm or more.
5) Disconnect the shorting pin of TP405.

5. Checking PLAY torque

1) Load the torque cassette TW-7131.
2) Check that the torque of the take-up reel is 10 to 20 g.cm when the unit is set to the PLAY mode.

6. Checking the back tension torque

1) Load the torque cassette TW-7131.
2) Check that the torque of the supply reel is 4 to 10 g.cm when the unit is set to the PLAY mode.

2．テスト・テープ

1）．トルク・カセット

・ソニー製　TW-7131

・ソニー製　TW-7232A

2）．トラッキング用

・ソニー製　TY-7251

3）．レベル用

・ソニー製　TY-7111

4）．ファンクション用

・ソニー製　TY-7551

5）．ブランク・テープ

・ソニー製　TY-30B相当品

3．アンローディング時巻取トルク調整

1）．トルク・カセット TW-7231A を装着する．

2）．OPEN/CLOSEキーを押して，アンローディング状態になった瞬間のサプライ側リールのトルクが，30～40g.cmになるように半固定抵抗 R539 を調整する．

4．FF／REWトルク確認

1）．TP405 PIN 1(XTEST)を GNDに落す．(TP405をショート・ピンによりショートする．)

2）．トルク・カセット TW-7231A を装着する．

3）．FFモードにしたとき，テイク・アップ側リールのトルクが，60g.cm以上であることを確認する．

4）．REWモードにしたとき，サプライ側リールのトルクが，60g.cm以上であることを確認する．

5）．TP405 のショート・ピンを外す．

5．PLAYトルク確認

1）．トルク・カセット TW-7131を装着する．

2）．PLAYモードにしたとき，テイク・アップ側リールのトルクが，10～20g.cmであることを確認する．

6．バック・テンション　トルク確認

1）．トルク・カセット TW-7131を装着する．

2）．PLAYモードにしたとき，サプライ側のトルクが，4 ～10g.cmであることを確認する．

7. **Checking the tape path**

1) Connect CH-1 of the oscilloscope to TP412 (ENV) and CH-2 to TP407 (SWH).
2) Short TP405 PIN1 (XTEST) to ground (short TP405 using the shorting pin).
3) Load the tracking test tape TY-7251, then set the unit to the PLAY mode.
4) As shown in Fig. 4-4, confirm that 80 % or more of the RF waveform is flat.
5) Disconnect the shorting pin from TP405.

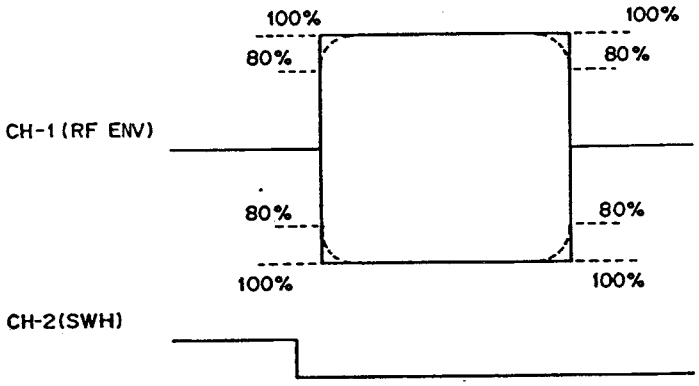


Fig. 4-4

7．テープ・パス確認

1）．オシロ・スコープのCH-1をTP412(ENV)に，CH-2をTP407(SWH)にそれぞれ接続する．

2）．TP405 PIN 1(XTEST)を GNDに落す．(TP405をショート・ピンによりショートする．)

3）．トラッキング用テスト・テープ TY-7251を装着し，PLAYモードにする．

4）．図4-4 の様に，RF波形の平坦度が 80%以上あることを確認する．

5）．TP405 のショート・ピンを外す．

8. **Adjustment of TACH**

1) Connect CH-1 of the oscilloscope to TP412 (ENV) and CH-2 to TP410 (TACH).
2) Load the tracking test tape TY-7251, then set the unit to the PLAY mode.
3) Adjust semi-fixed resistor R496 so that the time from the leading edge of the TACH waveform to the marker of the RF waveform is 803.6 ±15 us, as shown in Fig. 4-5.

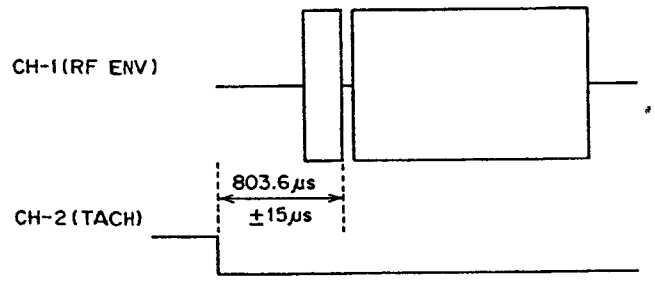


Fig. 4-5

8．TACH調整

1）．オシロ・スコープのCH-1をTP412(ENV)に，CH-2をTP410(TACH) にそれぞれ接続する．

2）．トラッキング用テスト・テープ TY-7251を装着し，PLAYモードにする．

3）．図4-5 の様に，TACH波形の立下りからRF波形のマーカーまでの時間が，803.6 ±15μs になるように半固定抵抗 R496 を調整する．

9. Adjustment of ATF GAIN

1) Connect CH-1 of the oscilloscope to TP413 (PILOT) and CH-2 to TP407 (SWH).
2) Load the level test tape TY-7111, then set the unit to the PLAY mode.
3) Adjust semi-fixed resistor R487 for head A and R486 for head B so that the 130 kHz pilot signal (levels A and B) are 200 ± 20 mV as shown in Fig. 4-6. At this time, the difference in output between level A and level B should be 20 mV or less.

9. ATF GAIN調整

1). オシロ・スコープのCH-1をTP413(PILOT)に，CH-2をTP407(SWH)にそれぞれ接続する．

2). レベル用テスト・テープ TY-7111を装着し，PLAYモードにする．

3). 図4-6 の様に，130KHzのパイロット信号（レベルA，B）が 200±20mVになるように，Aヘッドについては半固定抵抗 R487，Bヘッドについては半固定抵抗 R486 を調整する．又，このときA，Bの出力差は，20mV以下であること．

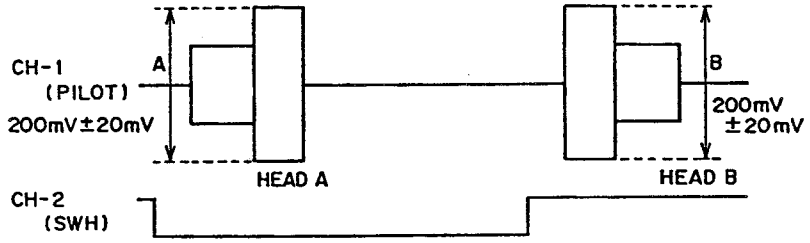


Fig. 4-6

10. Adjustment of the envelope detection level

1) Connect CH-1 of the oscilloscope to TP412 (ENV) and CH-2 to TP407 (SWH).
2) Load the level test tape TY-7111, then set the unit to the PLAY mode.
3) Adjust semix-fixed resistor R505 so that the levels of output waveforms A and B are 800 ± 100 mV. At this time, if the difference in output between level A and level B is too great for both of them to be the standard value, match the higher to the standard value.

10. エンベロープ検出レベル調整

1). オシロ・スコープのCH-1をTP412(ENV)に，CH-2をTP407(SWH)にそれぞれ接続する．

2). レベル用テスト・テープ TY-7111を装着し，PLAYモードにする．

3). 図4-7 の様に，出力波形A，Bのレベルが 800±100mV になるように半固定抵抗 R505 を調整する．又，このときA，Bの出力差が大きく規格値に入らない場合は，大きい方のレベルを規格値に合わせること．

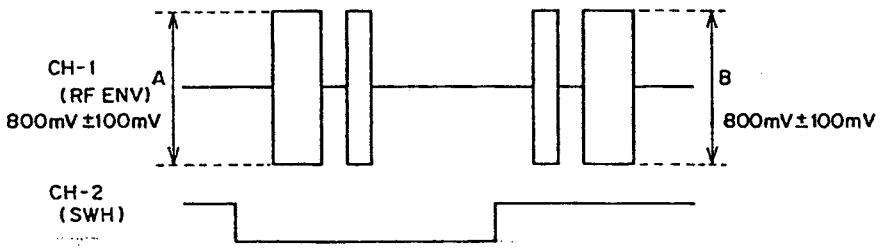


Fig. 4-7

11. Adjustment of the PLL free-running frequency

1) Set the unit to the STOP mode. Set the switches and controls to their required settings.
2) Connect TP402 PIN 1 to GND. (Short TP402 using the shorting pin.)
3) Connect the frequency counter between TP401 PIN 1 and GND.
4) Adjust by turning oscillation coil T402 so that the frequency counter reads 8.350 ±0.01 MHz (8.350 ±0.1 MHz during checking).
5) Disconnect the shorting pin from TP402.

12. Adjustment of the recording current

Notes.

1. To adjust the recording current, both the PCM section and ATF section should be adjusted. Adjust the PCM section first.
2. The blank tape used for recording should be one with an unused portion on which no RF signal has been recorded.

12-1. Confirmation of the output level of the PCM section

1) Connect CH-1 of the oscilloscope to TP412 (ENV), and CH-2 to TP407 (SWH).
2) Load the level test tape TY-7111, then set the unit to the PLAY mode.
3) As shown in Photo 4-1, make a note of the signal level voltages of heads A and B at the PCM section (1.57 MHz) of the waveform.

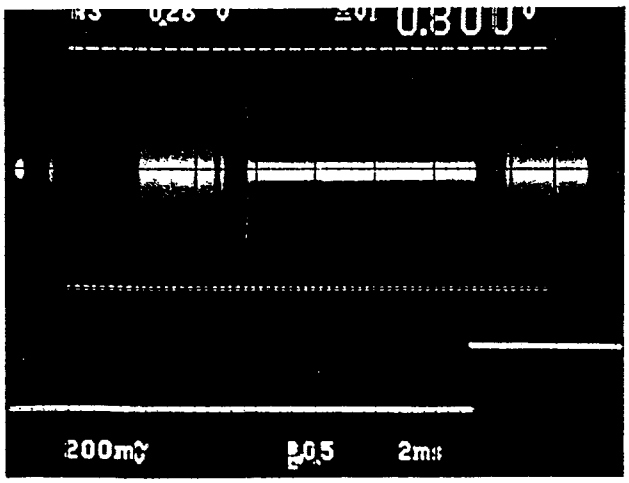


Photo 4-1

12-2. Confirmation of the recording current of the PCM section

1) Connect CH-1 of the oscilloscope to TP412 (ENV) and CH-2 to TP407 (SWH).
2) Load a blank TY-30B tape for recording and check there is a section which has not been previously recorded before making a non-signal recording.
3) Rewind the recorded portion, then confirm that the playback signal levels of heads A and B of the PCM section (1.57 MHz) are within ±3 dB of the levels noted down in 12-1 above.
(Refer to Photo 4-2.)

11. ＰＬＬ自走周波数調整

1）．ＳＴＯＰ状態にする．各ＳＷ．各ＶＲ等は任意です．

2）．TP402 PIN 1 を GNDに落す．（TP402 をショート・ピンによりショートする．）

3）．TP401 PIN 1 と GND間に周波数カウンターを接続する．

4）．周波数カウンターの値が 8.350±0.01MHz になるように，発振コイル T402 を回して調整する．（チェック時は，8.350 ±0.1MHz）

5）．TP402 のショート・ピンを外す．

12. 記録電流調整

> 注意　1．記録電流調整にはＰＣＭ部とＡＴＦ部がありますが，必ずＰＣＭ部の調整を先に行なうこと．
> 2．記録用ブランク・テープは，ＲＦ信号を記録したことのない未使用の部分を使用すること．

12-1. ＰＣＭ部の出力レベルの確認

1）．オシロスコープのCH-1をTP412(ENV)に，CH-2を TP407 (SWH) にそれぞれ接続する．

2）．レベル用テスト・テープ TY-7111装着し，ＰＬＡＹモードにする．

3）．写真4-1 の様に，波形の PCM部(1.57MHz) の信号レベルがＡヘッド，Ｂヘッドそれぞれ何Ｖであるかを記録（メモ）しておく．

12-2. ＰＣＭ部の記録電流確認

1）．オシロスコープのCH-1をTP412(ENV)に，CH-2を TP407 (SWH) にそれぞれ接続する．

2）．記録用ブランク・テープ TY-30B を装着し，未使用の部分であることを確認した後，無信号録音する．

3）．無信号録音した部分を巻戻し，再生したときのＡヘッド，Ｂヘッドそれぞれの PCM部(1.57MHz) の信号レベルが 12-1 項で記録（メモ）したレベルの±3dB 以内であることを確認する．（写真4-2 参照）

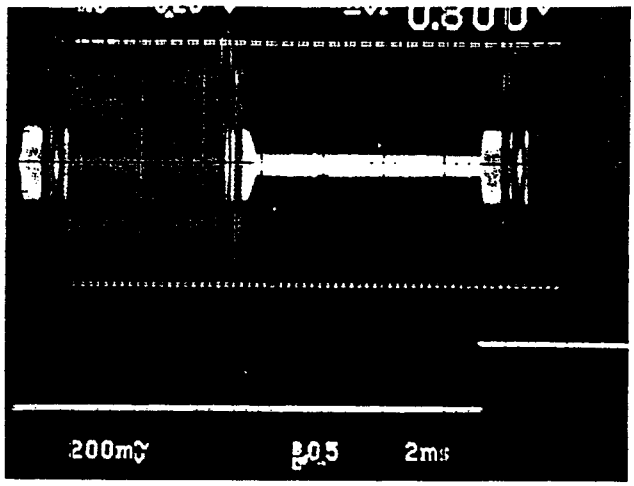


Photo 4-2

12-3. Adjustment of the recording current of the PCM section

If the values do not fall within the standard range even after performing procedure 12-2, adjust the recording current control VR PCM (Fig. 4-8) on the RF unit, then repeat procedure 12-2 until the values are as per 12-2.

12-3. ＰＣＭ部の記録電流調整

12-2項で規格に入らない場合は，RFユニット内の記録電流調整用半固定抵抗 PCM (図4-8)を調整後，12-2項を再度確認し規格に入るまで繰り返す．

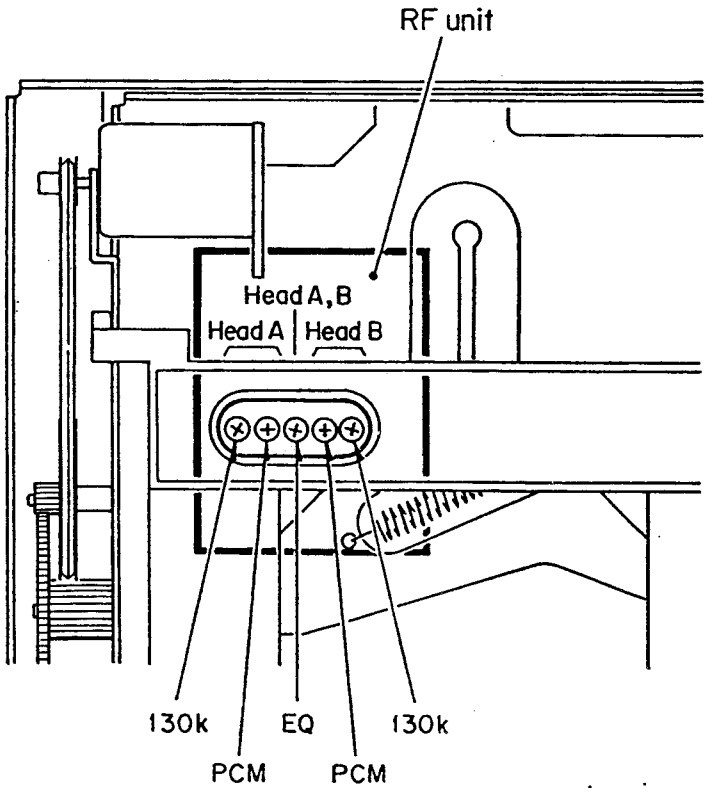


Fig. 4-8

12-4. Confirmation of the output level of the ATF section

1) Connect CH-1 of the oscilloscope to TP413 (PILOT) and CH-2 to TP407 (SWH).
2) Load the level test tape TY-7111, then set the unit to the PLAY mode.
3) As shown in Photo 4-3, make a note of the signal level voltages of heads A and B at the AFT section (130 kHz) of the waveform.

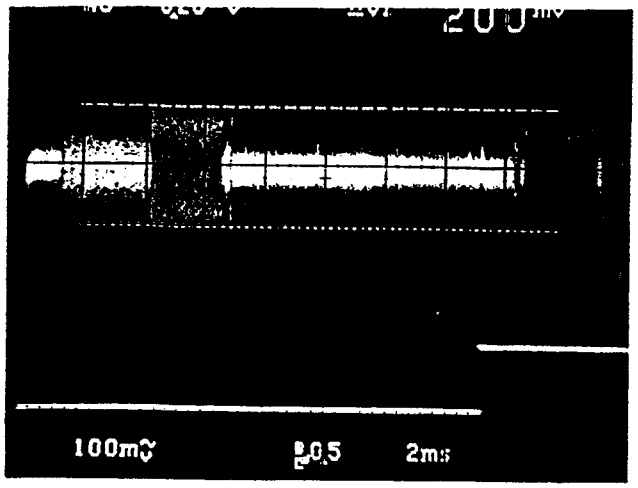


Photo 4-3

12-5. Confirmation of the recording current at the ATF section

1) Connect CH-1 of the oscilloscope to TP413 (PILOT) and CH-2 to TP407 (SWH).
2) Load a blank TY-30B tape for recording and confirm there is an unrecorded portion on the tape before making a non-signal recording.
3) Rewind the recorded portion, then confirm that the signal levels of heads A and B of the ATF section (130 kHz) when they are played back are within ±2 dB of the levels noted down in 12-4 above. (Refer to Photo 4-4.)

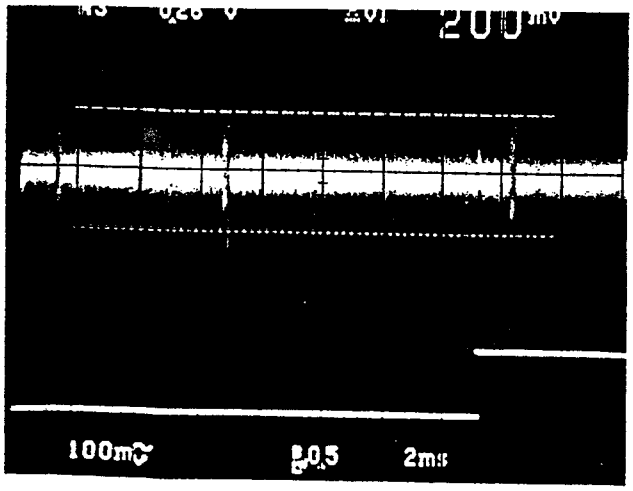


Photo 4-4

12-6. Adjustment of the recording current of the ATF section

If the values do not fall within the standard range even when procedure 12-5 has been performed, adjust the recording current control VR130K (Fig. 4-8) on the RF unit, then repeat procedure 12-5 until the values are as per 12-5.

12-4. ＡＴＦ部の出力レベルの確認

１）．オシロスコープのCH-1をTP413(PILOT)に，CH-2をTP407)SWH)にそれぞれ接続する．

２）．レベル用テスト・テープ TY-7111を装着し，ＰＬＡＹモードにする．

３）．写真4-3 の様に，波形の ATF部(130KHz)の信号レベルがＡヘッド，Ｂヘッドそれぞれ何Ｖであるかを記録（メモ）しておく．

12-5. ＡＴＦ部の記録電流確認

１）．オシロスコープのCH-1をTP413(PILOT)に，CH-2をTP407)SWH)にそれぞれ接続する．

２）．記録用ブランク・テープ TY-30B を装着し，未使用の部分であることを確認した後，無信号録音する．

３）．無信号録音した部分を巻戻し，再生したときのＡヘッド，Ｂヘッドそれぞれの ATF部(130KHz)の信号レベルが 12-4 項で記録（メモ）したレベルの±2dB 以内であることを確認する．（写真4-4 参照）

12-6. ＡＴＦ部の記録電流調整

12-5項で規格に入らない場合は，RFユニット内の記録電流調整半用固定抵抗 130K（図4-8）を調整後，12-5項を再度確認し規格に入るまで繰り返す．

13. Adjustment of Error Rate

13.1 Digital PCB section

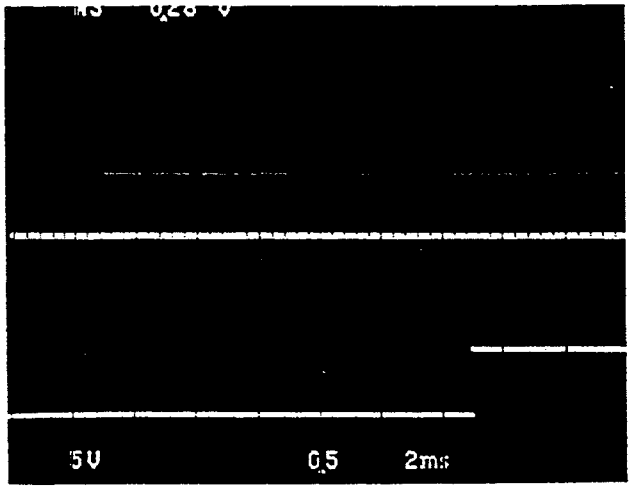
1) Connect CH-1 of the oscilloscope to TP404 PIN2 (FLAG) and CH-2 to TP407 (SWH).
2) Load the function test tape TY-7551, then play back PGM No. 13; at this time, as shown in Photo 4-5 ③, turn semi-fixed resistor R429 both ways until there are the least possible error flags.

13. エラー・レートの調整

13-1. デジタルＰＣＢ部

1）. オシロスコープのCH-1をTP404 PIN 2(FLAG) に，CH-2をTP407(SWH)にそれぞれ接続する．

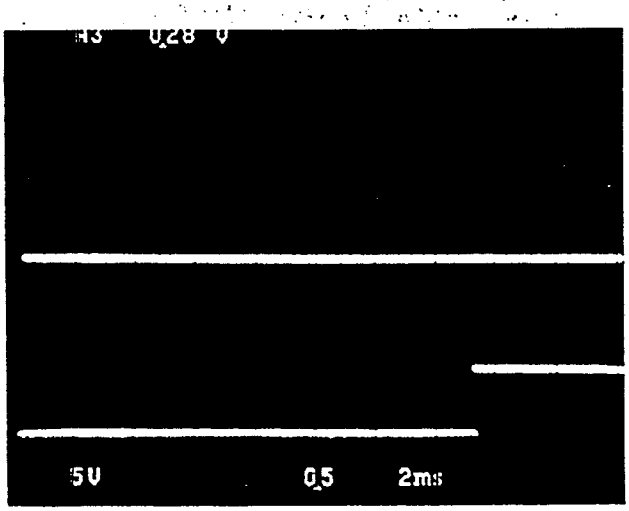
2）. ファンクション用テスト・テープ TY-7551を装着し，PGM NO.13 を再生したとき，写真4-5③の様にエラー・フラグが最少になる位置に半固定抵抗 R429 を左右両方向に回してみて調整する．



①

Error rate (10^{0} to 10^{-1})
No sound.

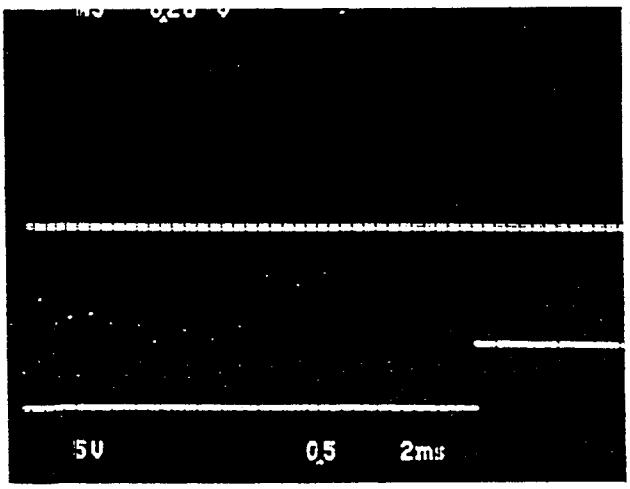
エラーレート(10^{0}～10^{-1})
音を出ず．



②

Error rate (10^{-2} to 10^{-3})
Flickering error flag.

エラーレート (10^{-2}～10^{-3})
エアーフラグが，かなりの頻度でちらつく．



③

Error rate (10^{-3} to 10^{-4})
Virtually no error flag appears.

エラーレート(10^{-3}～10^{-4})
エアーフラグが，ほとんど発生しない．

Photo 4-5

13-2. Adjustment of the EQ at the RF unit

1) Connect CH-1 of the oscilloscope to TP404 PIN 2 (FLAG), and CH-2 to TP407 (SWH).
2) Load the function test tape TY-7551, then play back PGM No. 13; at this time, as shown in Photo 4-5-3, turn control EQ (Fig. 4-8) on the RF unit both ways until there are the least possible error flags.

13-3. Confirmation of the error rate

1) Connect the connectors of the error rate counter to TP403 (POWER) and TP403 (FLAG).
2) Perform non-signal recording on an unrecorded portion of the blank tape for recording (TY-30B), then play it back. At this time, confirm that the error rate is 6×10^{-3} or less.

13-2. RFユニット部のEQ調整

1). オシロスコープのCH-1をTP404 PIN 2(FLAG) に，CH-2をTP407(SWH)にそれぞれ接続する．

2). ファンクション用テスト・テープ TY-7551を装着し，PGM NO.13 を再生したとき，写真4-5 3 の様にエラー・フラグが最少になる位置に RF ユニット内のEQ調整用半固定抵抗 EQ （図4-8 ）を左右両方向に回してみて調整する．

13-3. エラーレート確認

1). エラーレート・カウンターのコネクターをTP403(電源)とTP403(FLAG) にそれぞれ接続する．

2). 記録用ブランク・テープ TY-30B の未記録部分を無信号録音し，巻戻して再生したときのエラーレートが，$6X10^{-3}$以下であることを確認する．

4-2. Adjustment of the audio system
***PCB to be adjusted: AUDIO PCB (Fig. 4-9)**

4－2．オーディオ系調整
＊調整ＰＣＢ ： ＡＵＤＩＯ ＰＣＢ（図４－９）

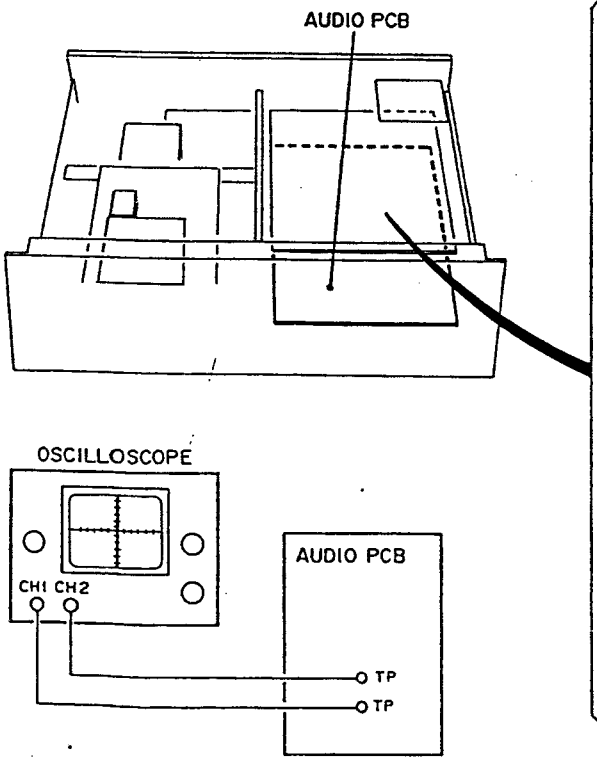


Fig. 4-10 Connection of test points for measurement
各端子の測定

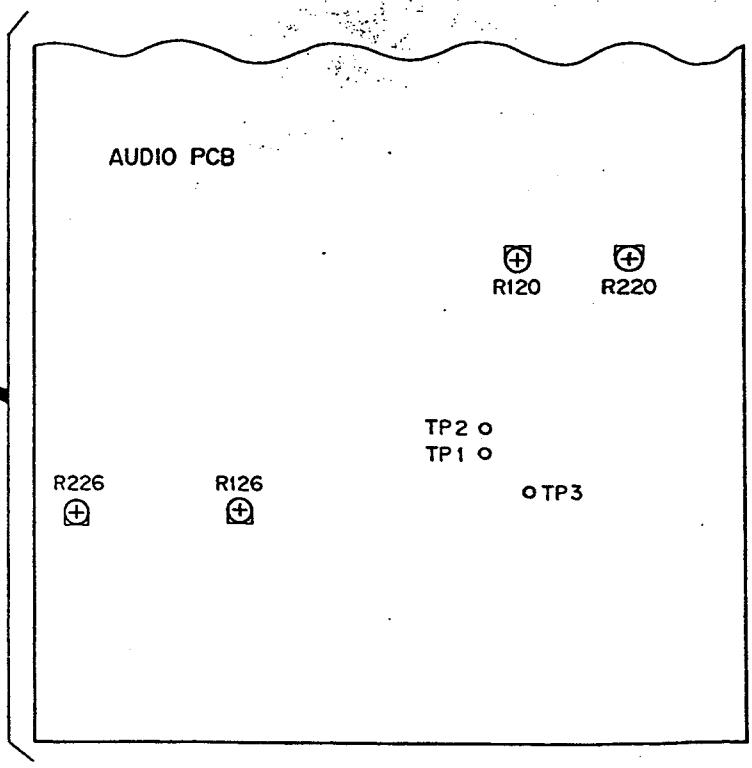


Fig. 4-9 Adjustment of the audio system and test point locations
オーディオ系調整とテスト・ポイント位置

1. Adjustment of the A/D OFFSET

1) Connect CH-1 of the oscilloscope to TP-3 (ADDT) and CH-2 to TP-1 (LRCK).
2) Short the LINE IN terminals of the set.
3) Set the UNBAL-BAL switch to the UNBAL position, then set all controls on the front panel to the minimum position.
4) Load the blank tape TY-30B or equivalent, then set the unit to the REC/PAUSE mode. At this time, adjust semi-fixed resistors R120 (L-channel) and R220 (R-channel) for adjusting A/D OFFSET so that the waveform at TP-3 (ADDT) is as shown in Photo 4-6 (Fig. 4-11 ④).

1．A／D　OFFSET調整

1）．オシロスコープのCH-1をTP-3(ADDT)に，CH-2をTP-1(LRCK)にそれぞれ接続する．

2）．セットの LINE IN端子をショートする．

3）．UNBAL-BAL スイッチをUNBAL にセットし，フロント・パネル上の全てのボリュームを最小にセットする．

4）．TY-30B相当のブランク・テープを装着し，REC/PAUSE状態にしたときの TP-3(ADDT) の波形が，写真4-6（図4-11④）の様になるように A/D OFFSET 調整用の半固定抵抗 R120(L-CH)，R220(R-CH)を調整する．

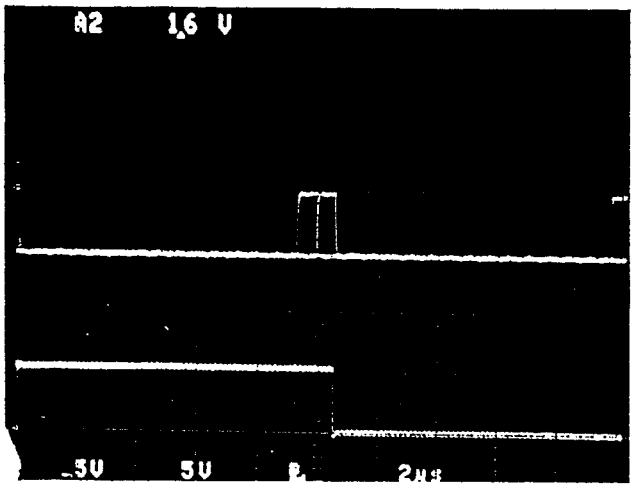


Photo 4-6

In the photo, only the lower 2 bits are high.
写真では、下位2bitのみビットが立っている．

Note: Since offset will deviate with a single adjustment, stop the unit, then set it to the REC/PAUSE mode and repeat adjustment two or three times.

注．一度の調整では OFFSET はずれるので，STOPして再び REC/PAUSE状態にして調整するということを2～3度繰り返して下さい．

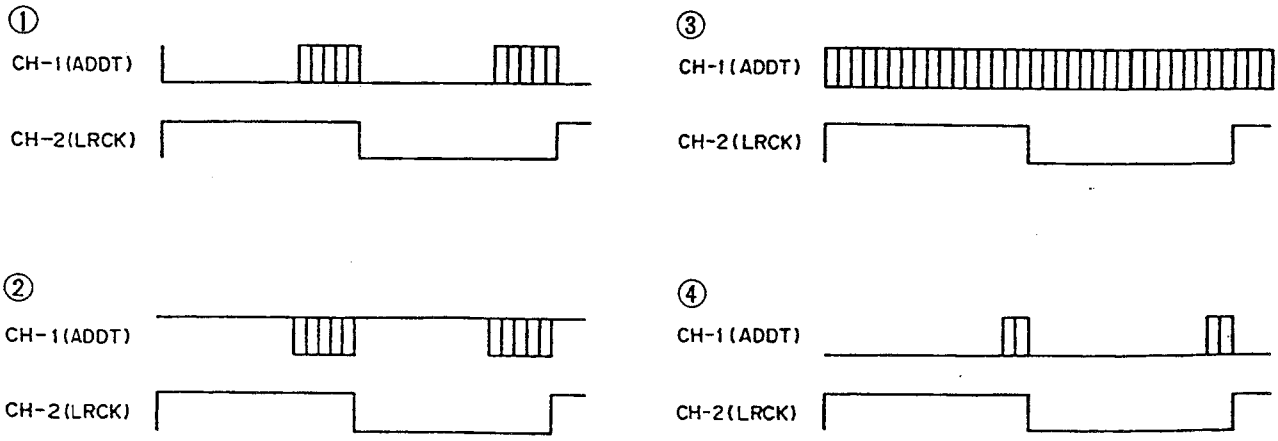


Fig. 4-11

* If adjusted to +DC, the upper bits will be "L" only (Fig. 4-11 ①). Conversely, if adjusted to —DC, the upper bits will be "H" only (Fig. 4-11 ②). If adjusted exactly at 0 V, the probability of the occurrence of "L" and "H" will be equal, and the uppermost bit (most significant bit) will continuously alternate between "L" and "H" (Photo 4-7, Fig. 4-11 ③) with the result that the S/N will deteriorate and the S/N value will fluctuate. Therefore, adjust to a point where upper bits will always be "L" and the lower bits stand out least (Photo 4-6, Fig. 4-11 ④).

※+DC 側に調整されると，上位ビットが "L" のみになり（図4-11①），逆に -DC側に調整されると，上位ビットが "H" のみになる（図4-11②）．０Ｖにジャスト調整すると "L" と "H" が発生する確立が等しく，最上位ビット (MSB) は "L" と "H" が常に反転し（写真4-7，図4-11③），S/N が悪化すると共に S/N値もふらつく．従って，上位ビットが完全に "L" に変化し，しかもビットが最も立たないポイントに調整する（写真4-6，図4-11④）．

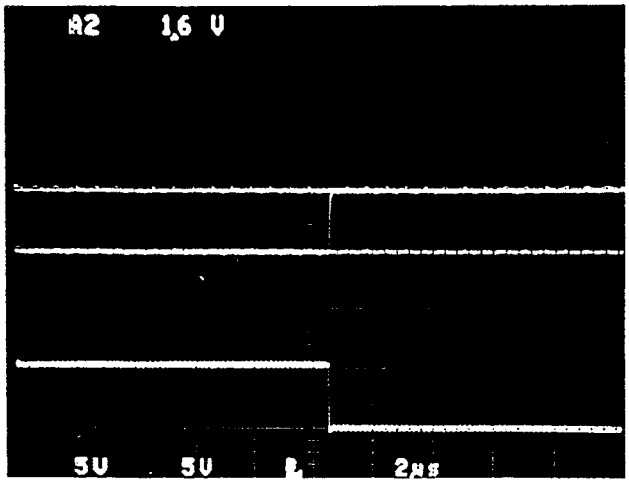


Photo 4-7

Upper bits are inverted at all times.
ADDT
LRCK

上位ビットが常に反転している。

2. **Confirmation of the LINE minimum input level**

1) Load a blank TY-30B tape then set the INPUT LEVEL control to the maximum position and set the unit to the REC monitor mode (press only the REC button).
2) Input the 1 kHz signal from the LINE INPUT, then adjust the input level to a level at which the "OVER" point of the level meter hardly ever lights using the attenuator. The LINE input level at this time should be within -6 ±1 dBV, and the difference between channels should be within 1 dB.

3. **Setting the LINE input level (reference recording input/output)**

1) Load a blank TY-30B tape then input a 1 kHz +6 dBV signal to the LINE INPUT, and set the unit to the REC monitor mode (press only the REC button).
2) Turn the INPUT LEVEL control, and set it so that the level meter indication hardly ever reaches the OVER point. The output level at this time should be 2.0 ±0.5V.

2．ＬＩＮＥ最少入力レベルの確認

1）．ブランク・テープ TY-30B を装着し，INPUT LEVEL ボリュームを最大とし RECモニター状態（REC ボタンのみを押す）にする．

2）．LINE INPUTより 1KHz の信号を入力し，アッテネーターにより入力レベルをレベル・メーターの『OVER』点灯直前の入力レベルに調整する．このときの LINE 入力レベルは -6 ±1dBVであること．又，チャネル差は 1dB 以内であること．

3．ＬＩＮＥ入力レベルセット（録音基準入出力）

1）．ブランク・テープ TY-30B を装着し，LINE INPUTより 1KHz.+6dBVの信号を入力して RECモニター状態（REC ボタンのみを押す）にする．

2）．INPUT LEVEL ボリュームを回し，レベル・メーターが『OVER』点灯直前になるようにセットする．このときの出力レベルは 2.0±0.5Vであること．

4. Adjustment of the D/A MSB

In the reference recording input/output state, set the input frequency to 1 kHz, then set the unit to the REC monitor mode (press only the REC button). So that the distortion factor at this time will be minimum, adjust semi-fixed resistors R126 (L-CH) and R226 (R-CH) for adjustment of the MSB. (The 22 kHz LPF, 400 Hz HPF and 30 kHz LPF should be IN and the sampling frequency should be 48 kHz.)

5. Playback output voltage (reference playback output)

Load the test tape TY-7551, then play back PGM No. "1" (1 kHz, 0 dB). At this time, the LINE OUTPUT voltage should be 2.0 ± 0.5 V. The difference between channels at this time should be within 1 dB.

6. Playback distortion factor

Load the test tape TY-7551, then play back PGM No. "1" (1 kHz, 0 dB). At this time, the distortion factor should be 0.007% or less.

7. Playback frequency characteristics

With the unit in the state described in 5, the playback frequency characteristics should be 0 ± 0.5 dB with respect to the reference playback output when PGM No. "2" (20 Hz), No. "3" (100 Hz), No. "4" (10 Hz) and No. "5" (20 kHz) are played back.

8. Playback channel separation

With the unit in the state described in 5, the channel separation should be 90 dB or more at 1 kHz and 86 dB or more at 10 kHz with respect to the reference playback output when PGM No. "7" (1 kHz L), No. "8" (10 kHz L), No. "9" (1 kHz R) and No. "10" (10 kHz R) are played back on the other channel. (At this time, the 22 kHz LPF and the IEC-A filter should be IN.)

9. Playback S/N ratio

Load the test tape TY-7551, then play back PGM No. "6" (non-signal). At this time, the S/N ratio should be 94 dB or more. (The 22 kHz LPF and IEC-A filter should be IN.)

4．D／A　MSB調整

録音基準入出力状態に於いて，入力周波数を 1KHz にし REC モニター状態（REC ボタンのみを押す）にする．このときの歪率が最少になるように，MSB 調整用の半固定抵抗 R126(L-CH)，R226(R-CH)を調整する．（但し，フィルターは 22KHz LPF，400Hz HPF，30KHz LPF：IN，サンプリング周波数は 48KHz ）

5．再生出力電圧（再生基準出力）

テスト・テープ TY-7551を装着し，PGM NO.『1』(1KHz.0dB)を再生したときの LINE OUTPUTの出力電圧は 2.0±0.5Vであること．又，チャネル差は 1dB以内であること．

6．再生歪率

テスト・テープ TY-7551を装着し，PGM NO.『1』(1KHz.0dB)を再生したときの歪率は 0.007% 以下であること．

7．再生周波数特性

5項の状態のとき，再生基準出力に対して PGM NO.『2』(20Hz)，『3』(100Hz)，『4』(10Hz)，『5』(20KHz) を再生したときの再生周波数特性は 0±0.5dB であること．

8．再生チャネル・セパレーション

5項の状態のとき，再生基準出力に対して PGM.NO.『7』(1KHz L)->R，『8』(10KHz L)->R，『9』(1KHz R)->L，『10』(10KHz R)->Lを再生したときのチャネル・セパレーションは 1KHz で90dB以上，10KHz で86dB以上であること．
（但し，フィルターは 22KHz LPF，IEC-A：IN）

9．再生S／N

テスト・テープ TY-7551を装着し，PGM NO.『6』（無信号）を再生したときの S/N値は 94dB 以上であること．
（但し，フィルターは 22KHz LPF，IEC-A：IN）

10. Checking the level meter

1) With the unit in the state described in 3, confirm that the "0 dB" of the level meter lights and the margin indication is 0 dB.
2) Next, when the input level is lowered by 1 dB from this state, the "−1 dB" of the level meter should light. When the margin reset button is pressed in this state, the margin indication should be 1 dB.
3) When the level is raised by 2 dB from the state in 2), the "OVER" should light in the level meter.

11. Headphone output

With the unit in the state described in 3, when the headphone volume control is turned to the maximum position, the headphone output should be 0.9 Vrms (100 mW) or more. (The load impedance at this time should be 8 ohm.)

12. Recording S/N ratio

1) Load a blank TY-30B tape then set the unit to the REC monitor mode (press only the REC button).
2) When there is no input to the LINE INPUT, the S/N value should be 85 dB or more (Fs: 48 kHz and 44.1 kHz) with respect to the reference recording output in 3. (The 22 kHz LPF and IEC-A filter should be IN.)

13. Distortion factor

With the unit in the state described in 3, the distortion factor should be 0.01% or less. The distortion factor at 10 kHz should be 0.01% or less. (The 22 kHz LPF, 400 Hz HPF and 30 kHz LPF should be IN.)

14. Recording frequency characteristics

With the unit in the state described in 3, when an input signal of 20 Hz to 22 kHz is applied, the recording frequency characteristics with respect to the 1 kHz output should be 0 ± 0.8 dB.

10. レベル・メーターの確認

1）. 3項の状態のとき，レベル・メーターの『0dB』が点灯し，マージン表示が 0dBであることを確認する.

2）. 次に，その状態から入力レベルを 1dB下げたとき，レベル・メーターの『-1dB』が点灯すること．この状態でマージン・リセット・ボタンを押したとき，マージン表示が 1dBになること.

3）. 2）の状態から 2dB上げたとき，レベル・メーターの『OVER』が点灯すること.

11. ヘッドホーン出力

3項の状態で，ヘッドホーン・ボリュームを最大に回したとき，ヘッドホーン出力が 0.9Vrms(100mW) 以上あること.

（但し，負荷インピーダンスは 8Ω）

12. 録音S／N

1）. ブランク・テープ TY-30B を装着し，REC モニター状態(RECボタンのみを押す) にする.

2）. LINE INPUTに入力無しの状態で，3項の録音基準出力に対して S/N値は 85dB 以上(Fs:48KHz.44.1KHz とも) であること.

（但し，フィルターは 22KHz LPF, IEC-A : IN)

13. 録音歪率

3項の状態のとき，歪率は 0.01%以下であること．又，10KHz の歪率は 0.010% 以下であること.

（但し，フィルターは 22KHz LPF, 400Hz HPF , 30KHz LPF : IN)

14. 録音周波数特性

3項の状態で，入力信号 20Hz ～22KHz を加えたとき，1KHz の出力に対しての録音周波数特性は 0±0.8dB であること.

15. Recording channel separation
With the unit in the state described in 3, the ratio in output between when the 1 kHz signal is input to a single channel and the output of the other channel should be 85 dB or more. In the same way, when the 10 kHz signal is input, the radio should be 80 dB or more. (At this time, the 22 kHz LPF and IEC-A filter should be IN and the input terminals of the channel to be measured should be shorted.)

16. Recording dynamic range
With the unit in the state described in 3, record the input signal with the level lowered by 60 dB, then play it back. At this time, the ratio between the distortion level and the reference recording level should be 84 dB or more. (At this time, the 22 kHz LPF and IEC-A filter should be IN and the 60 dB amplifier should be used.)

15. 録音チャネル・セパレーション

3項の状態で，入力信号を 1KHz 片チャンネルに加えたときの出力に対して，もう片チャンネルの出力との比は 85dB 以上であること．同様に 10KHzのときは 80dB 以上であること．（但し，フィルターは 22KHz LPF，IEC-A : IN，測定側 CH の入力端子はショートすること）

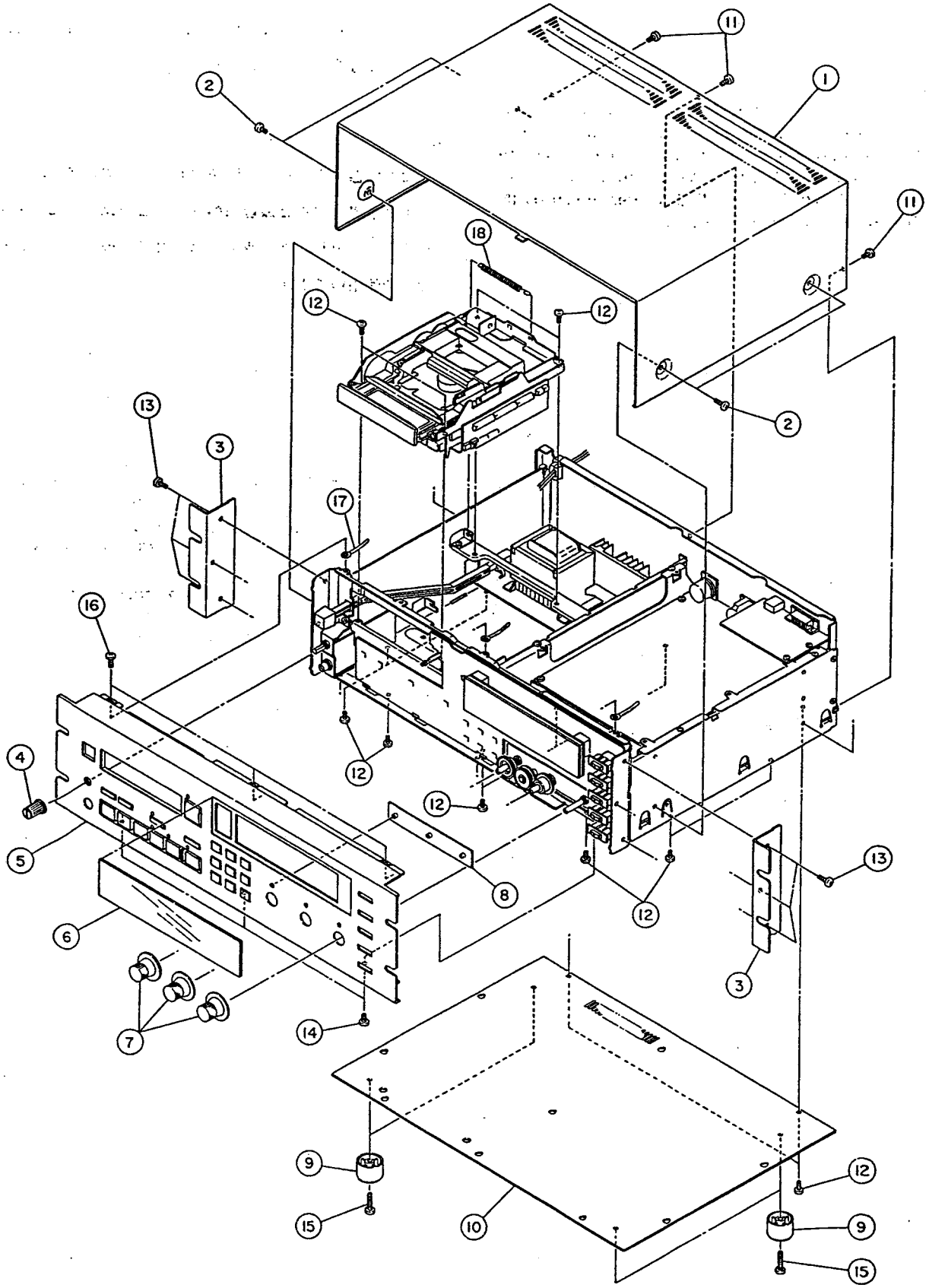
16. 録音ダイナミック・レンジ

3項の状態から，入力信号を 60dB 下げて録音し，再生したときの歪率レベルと録音基準レベルとの比は 84dB 以上であること．（但し，フィルターは 22KHz LPF，IEC-A : IN，60 dB AMP使用のこと）

5. EXPLODED VIEWS AND PARTS LISTS

分解図と部品表

EXPLODED VIEW-1



EXPLODED VIEW-1

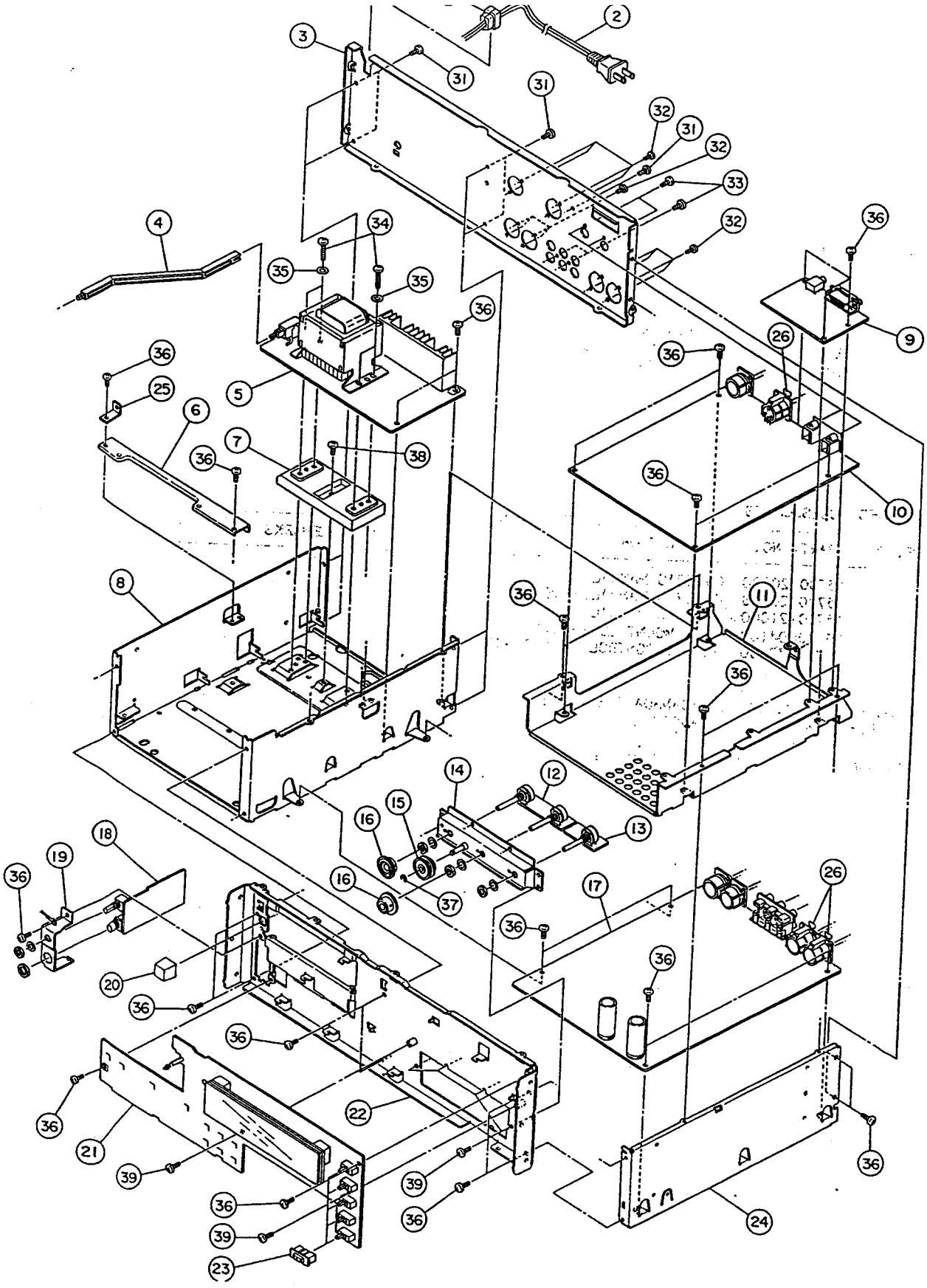
REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
1- 1	*5801350900	BONNET(B)	
1- 2	*5800612400	SCREW,M3X8(BLK)	
1- 3	*5801348700	ANGLE	
1- 4	5800961600	KNOB ASSY,VR IA	
1- 5	*5801347201	FRONT PANEL ASSY	
1- 6	*5801348600	WINDOW,FL	
1- 7	5801349300	KNOB	
1- 8	*5801348300	MARKER ASSY	
1- 9	5504676000	FOOT,19L	
1-10	*5801342500	PLATE,BOTTOM	
1-11	*5783613008	SCREW,BIND C-TITE M3X8(BLK NI)	
1-12	*5783033006	SCREW,BIND S-TITE M3X6	
1-13	*5783694008	SCREW,BIND M4X8(BLK NI)	
1-14	*5783693006	SCREW,BIND S-TITE M3X6(BLK NI)	
1-15	*5783034020	SCREW,BIND S-TITE M4X20	
1-16	*5786713008	SCREW,BIND S-TITE M3X8(BLK NI)	
1-17	*5786713000	CLIP,HARNESS 3X8	
1-18	*5801396801	SPRING,TRAY	

INCLUDED ACCESSORIES

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
	*5700120800	OWNER'S MANUAL[J]	
	*5700120900	OWNER'S MANUAL[EXCEPT J]	
	*5700121000	OWNER'S MANUAL[C,E]	
	*5740004100	RACK MOUNT SCREW KIT	
	*5744077400	REMOTE CONTROL UNIT,RC-30D	

[J]:JAPAN [US]:U.S.A. [C]:CANADA [GE]:GENERAL EXPORT
[E]:EUROPE [UK]:U.K. [A]:AUSTRALIA

Parts marked with *require longer delivery time.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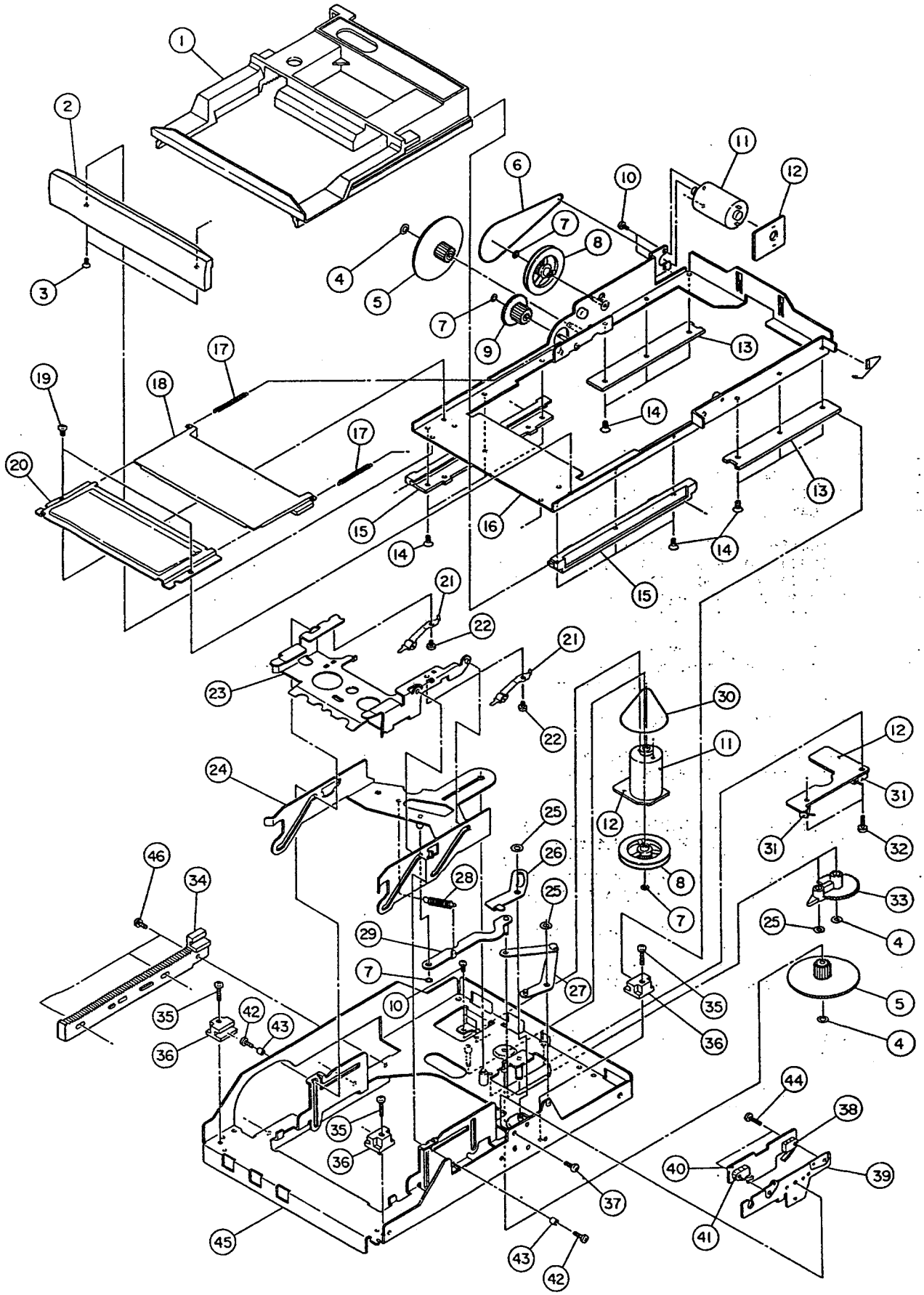
EXPLODED VIEW-2

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
2- 1	⚠*5317003400	BUSHING,2271	
2- 2	⚠*5350015600	CODE,AC [J]	
	⚠*5350010700	CORD,AC [US,C,GE]	
	⚠*5350011700	CORD,AC [E]	
	⚠*5128047000	CORD,AC [UK]	
	⚠*5350008300	CORD,AC [A]	
2- 3	*5801347900	PANEL,REAR	
2- 4	*5801349400	ROD,JOINT	
2- 5	*5200304000	POWER SUPPLY PCB ASSY [J]	Refer to pages 49 & 52
	*5200304010	POWER SUPPLY PCB ASSY [US]	Refer to pages 49 & 52
	*5200304020	POWER SUPPLY PCB ASSY [C]	Refer to pages 49 & 52
	*5200304030	POWER SUPPLY PCB ASSY [GE]	Refer to pages 49 & 52
	*5200304040	POWER SUPPLY PCB ASSY [E]	Refer to pages 49 & 52
	*5200304050	POWER SUPPLY PCB ASSY [UK]	Refer to pages 49 & 52
	*5200304060	POWER SUPPLY PCB ASSY [A]	Refer to pages 49 & 52
2- 6	*5801348900	BRACKET,MECHA.	
2- 7	*5801349500	HOLDER,TRANS.	
2- 8	*5801343001	CHASSIS,MAIN	
2- 9	*5200303800	CONTROL PCB ASSY	Refer to pages 48 & 51
2-10	*5200304100	DIGITAL PCB ASSY	Refer to pages 46 & 50
2-11	*5801347800	SHIELD	
2-12	*5200303500	REC-VR PCB ASSY	Refer to pages 48 & 51
2-13	*5200303400	OUTPUT-VR PCB ASSY	Refer to pages 48 & 51
2-14	*5801348000	BRACKET ASSY,VR	
2-15	5504569200	GEAR ASSY,FRICTION	
2-16	5504568000	GEAR ASSY,A	
2-17	*5200303200	AUDIO PCB ASSY [J,US,C,GE]	Refer to pages 47 & 50
	*5200303210	AUDIO PCB ASSY [E,UK,A]	Refer to pages 47 & 50
2-18	*5200303300	HEADPHONES PCB ASSY	Refer to pages 48 & 51
2-19	*5801347400	BRACKET,H.P	
2-20	5801349700	BUTTON,POWER	
2-21	*5200303700	FRONT PCB ASSY	Refer to pages 48 & 51
2-22	*5801387300	CHASSIS ASSY,FRONT	
2-23	5801348800	KNOB,SLIDE	
2-24	*5801349200	CHASSIS(B),SIDE	
2-25	*5801421600	HOOK,TRAY SPRING	
2-26	*5334073000	CLAMP,XLR CONN. SOCKET	
2-31	*5783693006	SCREW,BIND S-TITE M3X6(BLK NI)	
2-32	*5780122605	SCREW,PAN M2.6X5(BLK NI)	
2-33	*5783543008	SCREW,BIND.PT M3X8(BLK NI)	
2-34	*5783034022	SCREW,BIND S-TITE M4X22	
2-35	*5785012400	WASHER,FLAT 4.5X10X0.8T	
2-36	*5783033006	SCREW,BIND S-TITE M3X6	
2-37	*5786003000	E-RING,E-3	
2-38	*5783033008	SCREW,BIND S-TITE M3X8	
2-39	*5780003006	SCREW,BIND M3X6	

[J]:JAPAN [US]:U.S.A. [C]:CANADA [GE]:GENERAL EXPORT
[E]:EUROPE [UK]:U.K. [A]:AUSTRALIA

Parts marked with *require longer delivery time.

EXPLODED VIEW-3

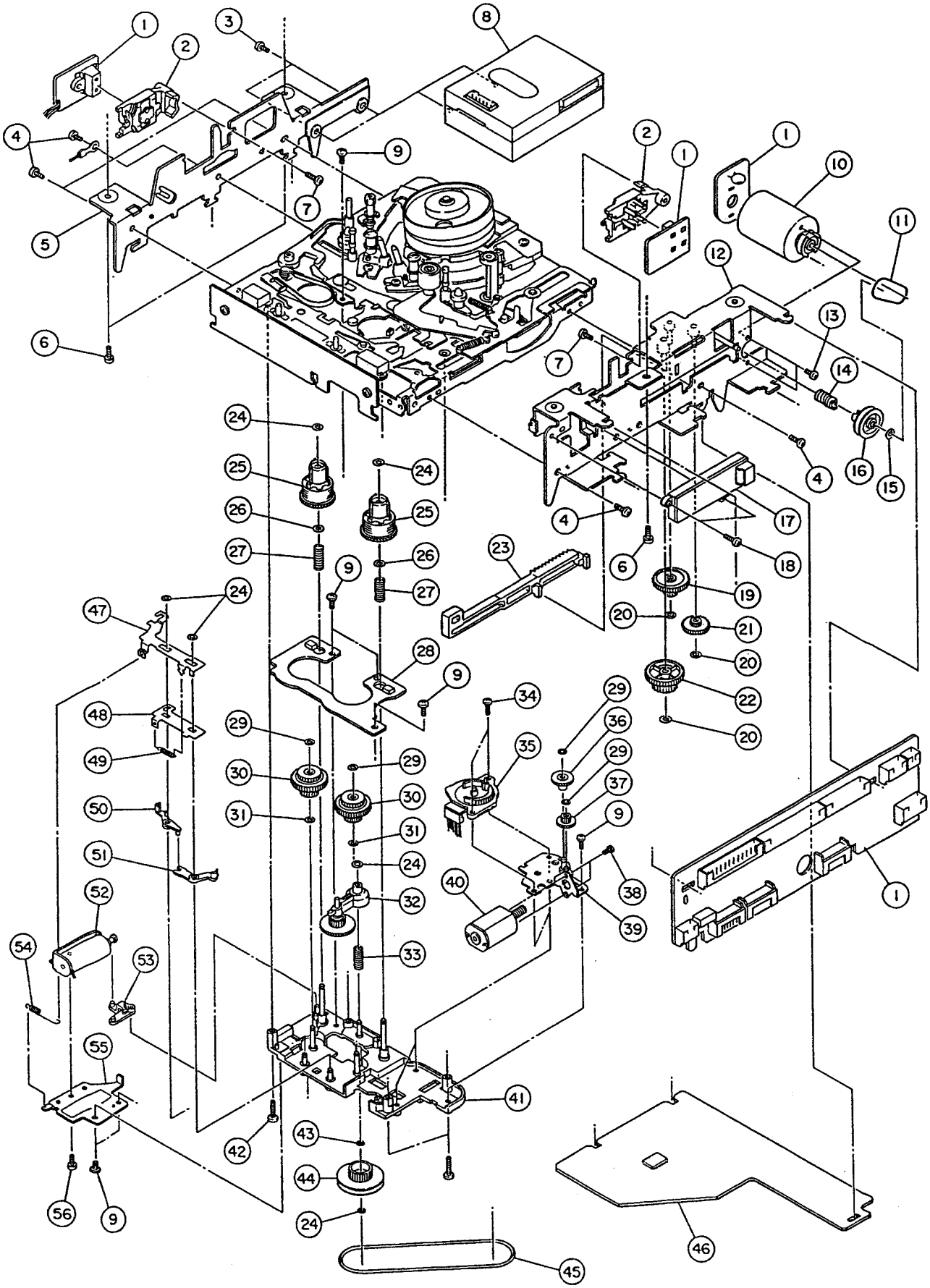


EXPLODED VIEW-3

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
3- 1	*5761819200	HOLDER,CASSETTE SD162-11	
3- 2	*5801349100	TRAY	
3- 3	*5780222004	SCREW,FLAT M2X4(BLK NI))	
3- 4	*5761817100	WASHER,3.5X0.25 FJ123-22	
3- 5	5761816800	GEAR,DRIVE SD168-11	
3- 6	5761818900	BELT,DRIVE SF117-11	
3- 7	*5761688400	WASHER	
3- 8	5761816700	PULLEY,GEAR SD170-11	
3- 9	5761819000	GEAR,TIMING SD169-11	
3-10	*5761815200	SCREW,PAN 2.0X2.0 NI FG121-16	
3-11	5761816600	MTR BLK,S525-013	
3-12	*5761817400	RELAY PCB,S237-022	
3-13	*5761818200	SPACER,REAR SD166-11	
3-14	*5761818100	SCREW,FLAT 2.0X3 ZN FG138-19	
3-15	*5761818300	SPACER,FRONT SD165-11	
3-16	*5761818400	RIV BASE TR ASSY,SC212-11	
3-17	*5761818500	SPRING,SK141-11	
3-18	*5761818600	SLIDER,SD163-11	
3-19	*5761818800	SCREW,PAN 2.0X2.5 NB UG19V-11	
3-20	*5761818700	COVER,SLIDER SC220-11	
3-21	*5761815500	SPRING ASSY,CASSETTE SC221-11	
3-22	*5761815600	SCREW,PAN 2.0X3 ZN FG177-24	
3-23	*5761815400	HOLDER,CASSETTE SC209-12	
3-24	*5761815700	RIV ARM ASSY,CASSETTE SC214-11	
3-25	*5761816000	WASHER,2.6X0.25 FJ123-21	
3-26	*5761816200	STOPPER,CAM SC217-11	
3-27	*5761816100	RIV LIVER ASSY,SC215-11	
3-28	*5761815800	SPRING,SK142-11	
3-29	*5761815900	RIV LINK SL ASSY,SC216-11	
3-30	5761817000	BELT,DRIVE SF118-11	
3-31	*5761817300	SPPB11,UE15S-14	
3-32	*5761817200	SCREW,PAN 2.0X8 ZN FG114-22	
3-33	5761816900	GEAR,CRANK SD172-11	
3-34	5761819400	GEAR,PACK SD167-11	
3-35	*5761819300	SCREW,PAN 2.6X10 ZN UG19W-11	
3-36	*5761819100	BUSHING,TRAY SD164-11	
3-37	*5761817500	SCREW,PAN 2.0X5 ZN FG114-23	
3-38	*5761817800	SPPB22,UE18N-11	
3-39	*5761817600	HOLDER,SW SC233-11	
3-40	*5761817900	RELAY PCB,S237-023	
3-41	*5761817700	SPPB21,UE18P-11	
3-42	*5761816500	SCREW,PAN 2.0X4 NI FG121-13	
3-43	*5761816400	CALLAR,SL243-12	
3-44	*5761818000	SCREW,PAN 2.0X6 NI FG140-29	
3-45	*5761816300	RIV CHASSIS ASSY,SC213-11	
3-46	*5761791800	SCREW,PAN 2.6X5,FG114-14	

Parts marked with *require longer delivery time.

EXPLODED VIEW-4

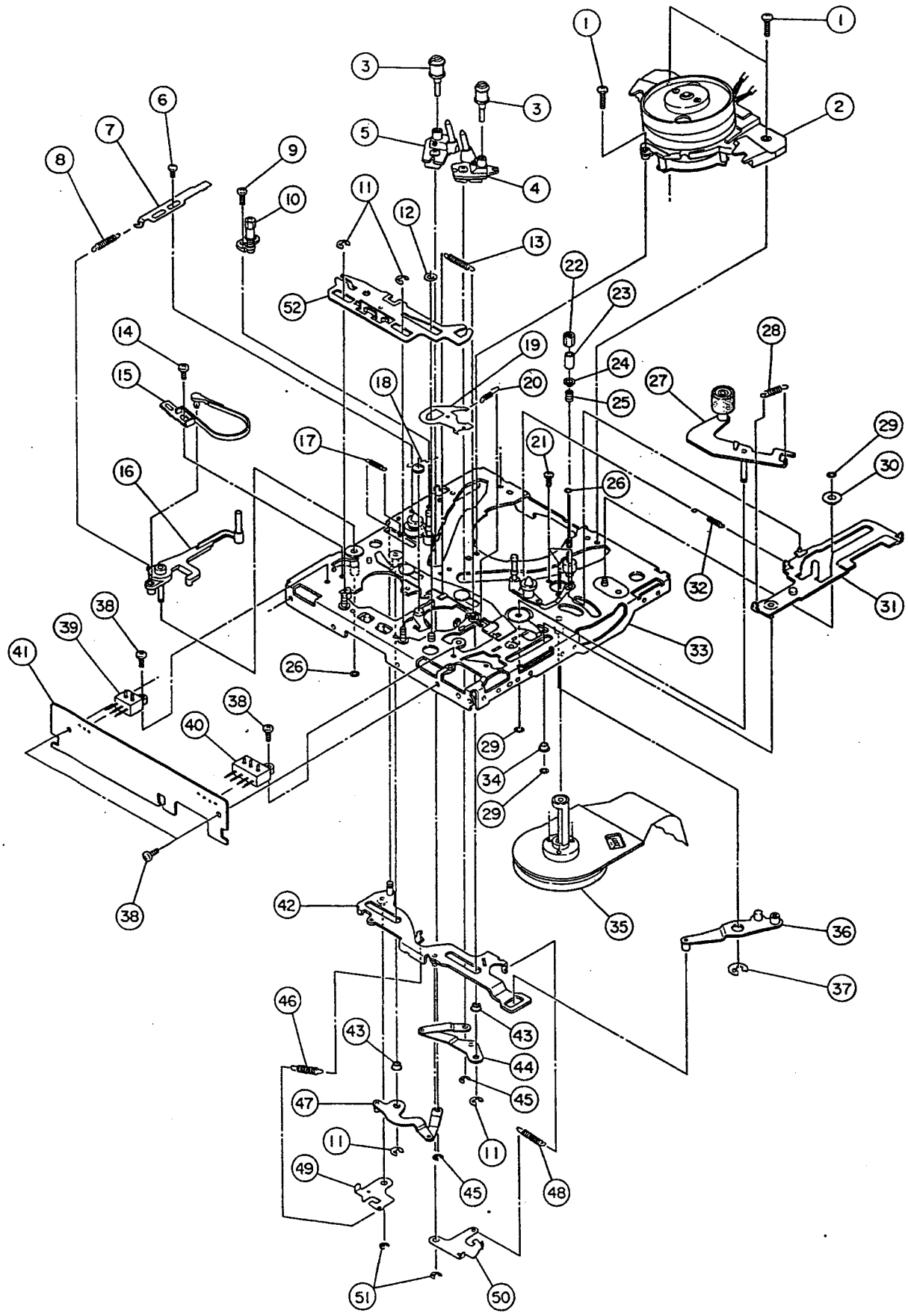


EXPLODED VIEW-4

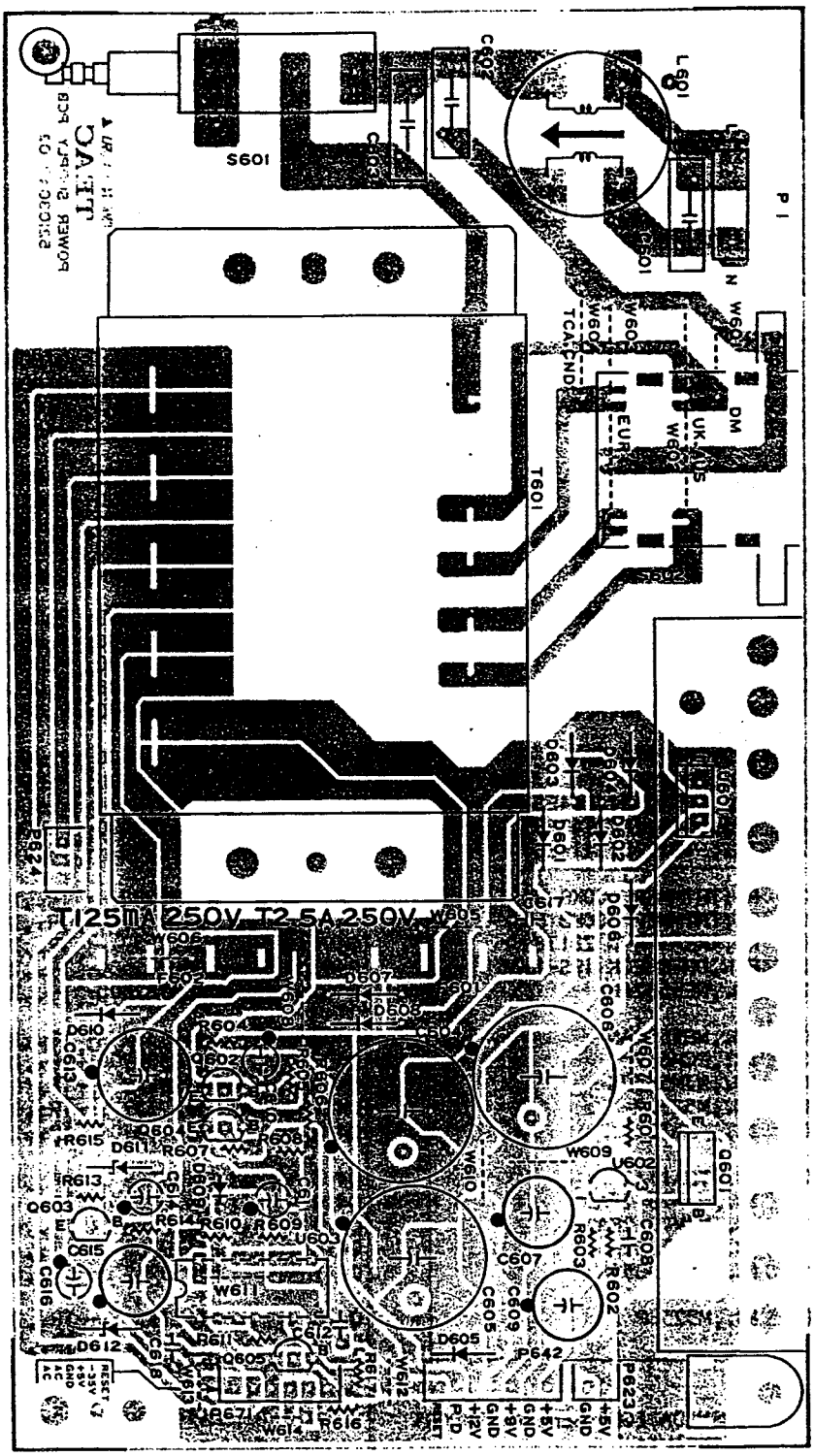
REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
4- 1	*5761813800	CONTROL PCB BLK,S737-011	
4- 2	*5761813700	COVER,SENSOR SD158-12	
4- 3	*5761813000	SCREW,BIND 2.0X2.5 ZN UG11K-18	
4- 4	*5761813600	SCREW,PAN 2.0X4 ZN KG194-34	
4- 5	*5761813400	CHASSIS(L),SC207-11	
4- 6	*5761791800	SCREW,PAN 2.6X5 2N FG114-14	
4- 7	*5761689500	SCREW,WAVE 2X6 UG12H-11	
4- 8	5761813300	RF AMP BLK,S773-011	
4- 9	*5761805000	SCREW,PAN 1.7X4 ZN UG11W-13	
4-10	5761814400	MTR BLK,S525-011	
4-11	5761814700	BELT,LDG SF116-11	
4-12	*5761813900	GEAR BASE BLK,S627-011	
4-13	*5761815200	SCREW,PAN 2.0X2.0 NI FG121-16	
4-14	*5761814500	WORM(L),SN113-11	
4-15	*5761815000	WASHER,1.4X0.35 UG14P-11	
4-16	5761814600	PULLEY,WARM SR122-11	
4-17	*5761814800	SW(T),MODE UE18E-12	
4-18	*5761815100	SCREW,PAN 1.7X4.5NBT UG17T-11	
4-19	5761814000	GEAR,AL SN116-11	
4-20	*5761814900	WASHER,UJ13N-16	
4-21	5761814100	WHEEL(L),WARM SN115-11	
4-22	5761814200	GEAR,SN145-11	
4-23	*5761814300	RACK,LD SN146-12	
4-24	*5761805200	WASHER,POLI. 1.2X0.25 T FJ123-13	
4-25	5761806700	REEL ASSY,SR117-21	
4-26	*5761686500	WASHER,UJ12B-11	
4-27	*5761806800	SPRING,BT SK113-12	
4-28	*5761806300	SENSOR BLK,S758-011	
4-29	*5761806200	WASHER,0.9X0.25 UJ13M-11	
4-30	5761806100	TU ASSY,SR119-32	
4-31	*5761806000	WASHER,POLY. 1.4X0.25 FJ111-16	
4-32	5761806500	ARM ASSY,ID GEAR SR114-13	
4-33	*5761806400	SPRING,CENTER SK112-12	
4-34	*5761807800	SCREW,PAN 1.7X6 ZB UG11W-14	
4-35	*5761807700	SENSOR BLK,S758-012	
4-36	5761807900	GEAR,CENTER SN130-11	
4-37	5761808000	WHEEL,WORM SN131-11	
4-38	*5761807400	SCREW,PAN 1.4X1.6 NI FG164-32	
4-39	*5761807500	BRACKET,MOTOR S149-013	
4-40	5761807600	MOTOR,S064-017	
4-41	*5761805600	BASE BLK,GEAR S627-012 ← Ass'y 5772923300	
4-42	*5761805100	SCREW,PAN 1.7X8 NBT UG17T-12	
4-43	*5761745600	SLIDER,POLY.	
4-44	5761805300	PULLEY,CENTER SR115-11	
4-45	5761808100	BELT,SF111-13	
4-46	*5761815300	DRIVER PCB BLK,S774-011	
4-47	*5761807300	LIMITER,SC159-12	
4-48	*5761807100	PLATE,BRAKE ACTUATING SC157-11	
4-49	*5761807200	SPRING,LIMITER SK128-11	
4-50	*5761806900	BRAKE(L),SOLENOID SD132-14	
4-51	*5761807000	BRAKE(R),SOLENOID SD133-14	
4-52	5761805800	SOLENOID,SW122-11	
4-53	*5761805900	BRAKE,LEVER SD146-12	
4-54	*5761805500	SPRING,SK127-12	
4-55	*5761805700	BRACKET,SOLENOID SC192-12	
4-56	*5761804900	SCREW,PAN 2.0X5 ZN FG114-23	

Parts marked with *require longer delivery time.

EXPLODED VIEW-5



POWER SUPPLY PCB ASSY



AUDIO PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200303200	AUDIO PCB ASSY[J,US,C,GE]
	*5200303210	AUDIO PCB ASSY[E,UK,A]
	*5210303202	AUDIO PCB
	*5730021000	HEATSINK,OSH-1625-SP
	*5780003008	SCREW,BIND M3X8
	*5801391900	PLATE,EARTH
	*5332015800	HOLDER,FUSE
C301,302 ⚠	5260309200	C.,ELEC. 3300UF 25V M
C307,308 ⚠	5260463220	C.,ELEC. 100UF 25V M
C311,312 ⚠	5260463020	C.,ELEC. 100UF 10V M
C314 ⚠	5260424120	C.,ELEC. 100UF 25V M
D101,201	5224012920	DIODE,1S2473
D102,202	5224012920	DIODE,1S2473
D103,203	5224018020	DIODE,MC932
D104,204	5224018020	DIODE,MC932
D301	5224016720	DIODE,ISR35-200A FT
D302-305 ⚠	5224013210	DIODE,DS135D FA4 FF
D306,307	5224012920	DIODE,1S2473
D308	5224016720	DIODE,ISR35-200A FT
F1,2 ⚠	5041138000	FUSE,500MA/250V T;MINI[E,UK,A]
J1,2	5334072900	SOCKET,XLR CONN.
J3	5330513900	JACK,PIN 6P
K101,201	5290011800	RELAY,12V G2VN234P
K301	5290011800	RELAY,12V G2VN234P
P1,2	5334072800	PLUG,XLR CONN.
Q101,201	5145082000	TR.,2SC-2060Q
Q102,202	5145082000	TR.,2SC-2060Q
Q103,203	5145084000	TR.,2SA-934Q
Q104,204	5145084000	TR.,2SA-934Q
Q105,205	5231762520	TR.,2SD1915TA
Q106,206	5231762520	TR.,2SD1915TA
Q301	5230780920	TR.,2SC2603F
Q302-304	5232254720	TR.,DIGI. DTA114ES
Q305	5232256820	TR.,DIGI. DTB143ES
Q306,307	5232255620	TR.,DIGI. DTC114ES
R120,220	5280182302	R.,TRIMMER 100KB H.
R126,226	5280182302	R.,TRIMMER 100KB H.
R160,260	5242117800	R.,ARRAY RMN Z8178
TP1-3	5317002100	PIN,DH CHECK IPS-1136
U101,201	5220431800	IC.,NE5532AN
U102,202	5220431800	IC.,NE5532AN
U103,203	5220075600	IC.,PCM61P
U104,204	5220431100	IC.,NJM5532S
U301	5220430500	IC.,M5238P
U302	5220091200	IC.,AK5326
U303	5220443500	IC.,TDA1542
U304,306	13447956	IC.,NJM7812FA
U305	13447973	IC.,NJM7912FA
U307	13447952	IC.,NJM7805FA
U308	13447969	IC.,NJM7905FA
U309	5220430500	IC.,M5238P

[J]:JAPAN [US]:U.S.A. [C]:CANADA [GE]:GENERAL EXPORT
[E]:EUROPE [UK]:U.K. [A]:AUSTRALIA

Parts marked with *require longer delivery time.

DIGITAL PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200304100	DIGITAL PCB ASSY
	*5210304101	DIGITAL PCB
	*5332016900	IC.,SOCKET 64P
	*5800752900	HEATSINK
	*5783723008	SCREW,BIND B-TITE M3X8
	*5801387500	PLATE,EARTH DIGITAL
D401	13411618	DIODE,DA119
D403	5224018020	DIODE,MC932
D404	5224018020	DIODE,MC932
D405	5224018020	DIODE,MC932
D406	5224018020	DIODE,MC932
D407	13411618	DIODE,DA119
D408	13411618	DIODE,DA119
D409	5224573201	DIODE,ZENER RD5.1EL2 FR
D410	5224573201	DIODE,ZENER RD5.1EL2 FR
D411	5224572201	DIODE,ZENER RD3.6EL2 FR
D412	5224572201	DIODE,ZENER RD3.6EL2 FR
D413	5224013210	DIODE,DS135D FA4 FF
D414	13411618	DIODE,DA119
J5	5330512700	JACK,PIN 1P YKB11-0400
J6	5330512700	JACK,PIN 1P YKB11-0400
J7	5334072900	SOCKET,XLR CONN.
L401	5286033320	COIL,CHOKE 3.3UH K(LAP2T)VT
L402	5286033520	COIL,CHOKE 4.7UH(LAP2T)VT
L403	5286030200	COIL,CHOKE 47UH LAL04KB
P3	5334072800	PLUG,XLR CONN.
P405	5336249600	PLUG,CONN. B06B-PH-K-S(WHT)
P406	5336249500	PLUG,CONN. B05B-PH-K-S(WHT)
P411	5336249900	PLUG,CONN. B09B-PH-K-S(WHT)
P412	5336249200	PLUG,CONN. B02B-PH-K-S(WHT)
P421	5336249500	PLUG,CONN. B05B-PH-K-S(WHT)
P422	5336249500	PLUG,CONN. B05B-PH-K-S(WHT)
P423	5336249400	PLUG,CONN. B04B-PH-K-S(WHT)
P472	5336249900	PLUG,CONN. B09B-PH-K-S(WHT)
Q401	13428288	TR.,(DTC144EKT-96)
Q403	13428288	TR.,(DTC144EKT-96)
Q404	13427337	TR.,2SC2412K
Q405	13427337	TR.,2SC2412K
Q406	5230782500	TR.,2SC2620C TL
Q407	5230782500	TR.,2SC2620C TL
Q408	13427337	TR.,2SC2412K
Q409	5230509700	TR.,2SB1274R
Q410	13428288	TR,(DTC144EKT-96)
Q411	13427337	TR.,2SC2412K
Q412	5230509700	TR.,2SB1274R
Q413	13428288	TR.,(DTC144EKT-96)
Q414	13428288	TR.,(DTC144EKT-96)
Q415	13428288	TR.,(DTC144EKT-96)
Q416	13428288	TR.,(DTC144EKT-96)
Q417	13428288	TR.,(DTC144EKT-96)
Q418	13427337	TR.,2SC2412K
Q419	13427337	TR.,2SC2412K
Q420	13428288	TR.,(DTC144EKT-96)
Q421	13428288	TR.,(DTC144EKT-96)
Q422	13428288	TR.,(DTC144EKT-96)
Q423	13428288	TR.,(DTC144EKT-96)
Q424	5231762600	TR.,2SD1221Y
Q425	5230510200	TR.,2SB880
Q426	13428288	TR,(DTC144EKT-96)
Q427	13428288	TR.,(DTC144EKT-96)

EXPLODED VIEW-5

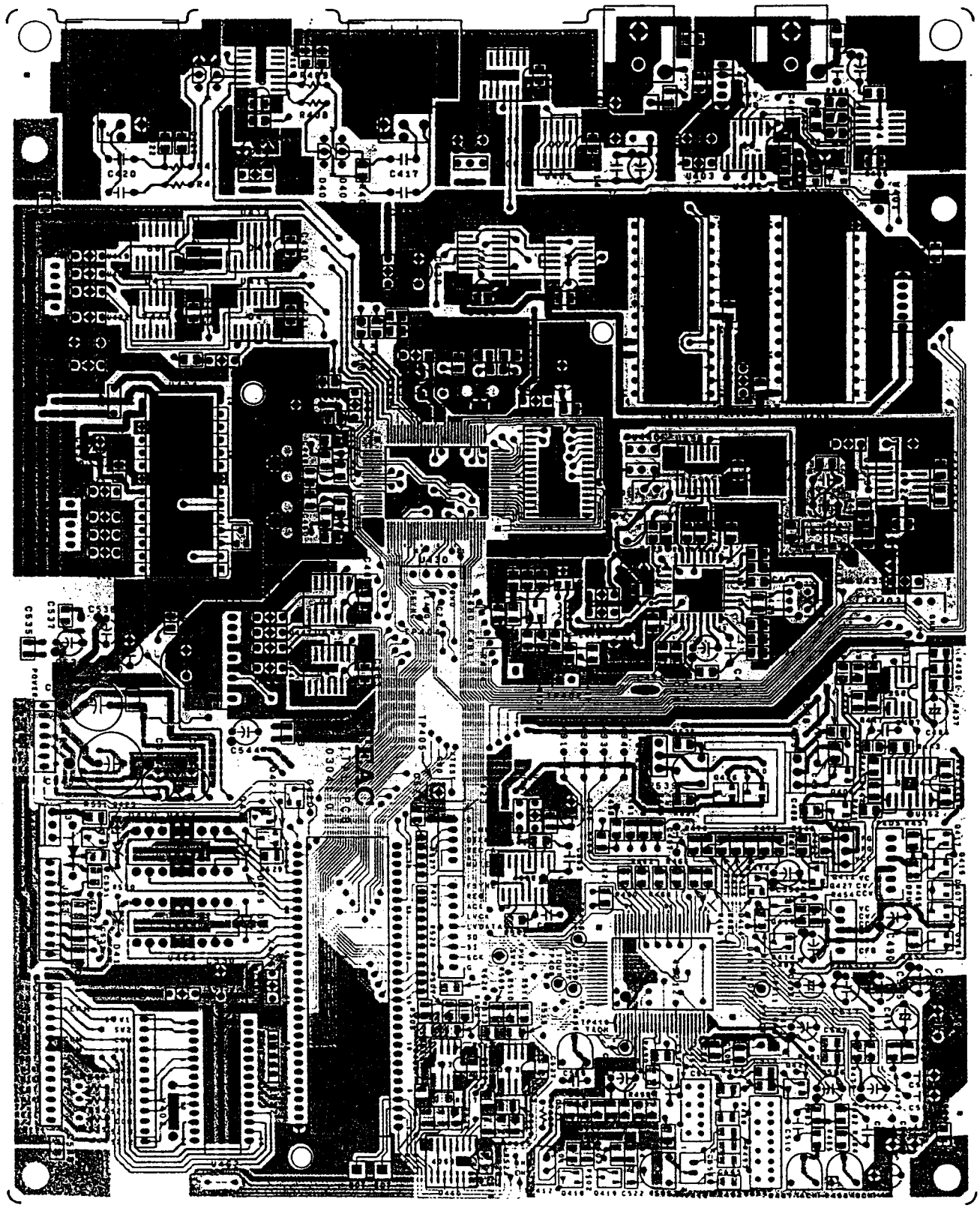
REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
5- 1	*5761812800	SCREW,PAN 2.0X8 NI FG140-26	
5- 2	5761812700	CYLINDER ASSY,CYKC2W005A	
5- 3	5761812400	ROLLER,GUIDE SQ123-11	
5- 4	5761812000	INCLINED GUIDE ASSY,S272-016	
5- 5	5761811900	INCLINED GUIDE ASSY,S272-015	
5- 6	*5761811400	SCREW,MI.7X2 FG164-12	
5- 7	*5761811000	SP ADJUST,SC129-12	
5- 8	*5761811500	SPRING,SK117-13	
5- 9	*5761811100	SCREW,PAN 2.0X5 ZN KG194-35	
5-10	5761810900	PI GUIDE ASSY,SQ114-14	
5-11	*5761686100	E-RING KG111-19	
5-12	*5761812600	WASHER,2.1X0.25 FJ123-20	
5-13	*5761811800	SPRING(G),SLIDE SK143-11	
5-14	*5761811700	SCREW,PAN 1.7X2.5 NB FG164-20	
5-15	5761811600	BELT ASSY,TENSION SZ122-12	
5-16	*5761811300	ARM ASSY,TENSION SQ120-12	
5-17	*5761811200	SPRING,TG-K SK122-12	
5-18	*5761812100	SPRING,R-PLAY BT SK114-15	
5-19	*5761812300	PLATE,SPRING SC142-12	
5-20	*5761812200	SPRING;HOLD SK121-16	
5-21	*5761809600	SCREW,PAN 1.7X2.5 NI UG15K-12	
5-22	*5761810700	NUT,PI SD157-11	
5-23	*5761810600	ROLLER(P),SL230-12	
5-24	*5761810500	FLANGE(P),SL231-11	
5-25	*5761810400	SPRING,P2 SK139-11	
5-26	*5761805200	WASHER,POLY. 1.2X0.25 T FJ123-13	
5-27	*5761810200	PINCH ROLLER ASSY,SR118-13	
5-28	*5761810300	SPRING,PINCH ROLLER SK118-16	
5-29	*5761688400	WASHER	
5-30	*5761810000	ROLLER,SLD SL113-13	
5-31	*5761810100	SLIDER LDG BLK,S637-012	
5-32	*5761809900	SPRING,TG-(R) SK140-12	
5-33	*5761810800	CHASSIS BASE BLK,S612-011	
5-34	5761809800	ROLLER,SLD SL139-13	
5-35	5761808200	MOTOR,CAPSTAN MMFN5Z001A	
5-36	*5761808400	LEVER,LDG BLK S682-011	
5-37	*5761808300	ES-RING 3.0 ZU KG111-13	
5-38	*5761813000	SCREW,BIND 2.0X2.5 ZN UG11K-18	
5-39	*5761812900	SPPW52,UE16C-11	
5-40	*5761813100	SPPW53006,UE18M-11	
5-41	*5761813200	RELAY PCB,S237-021	
5-42	*5761809500	SLIDER LDG BLK,S637-011	
5-43	*5761809300	CALLAR,LOD SL133-12	
5-44	*5761809100	LINK LDG BLK,S551-011	
5-45	*5761809000	ES-RING 1.5 ZU KG111-18	
5-46	*5761808900	SPRING(L),LDG SK119-13	
5-47	*5761809400	LINK LDG BLK,S551-012	
5-48	*5761808600	SPRING(R),LDG SK120-12	
5-49	*5761808800	PLATE(1),SPRING SC119-11	
5-50	*5761808700	PLATE(2),SPRING SC120-11	
5-51	*5761808500	E-RING UG13U-12	
5-52	*5761812500	SLIDE F/R,SC143-12	

Parts marked with *require longer delivery time.

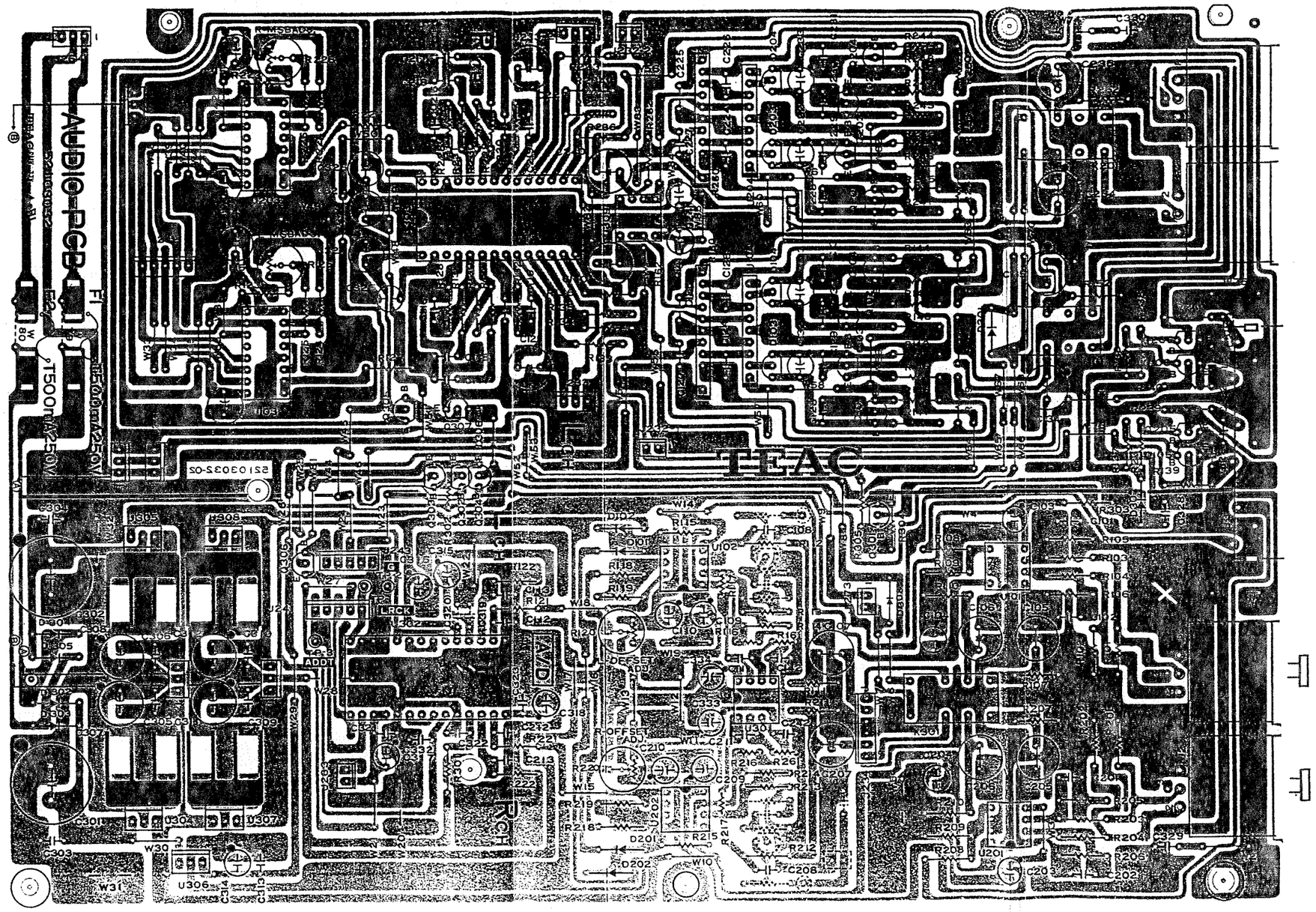
6. PC BOARDS AND PARTS LISTS

基板図と部品表

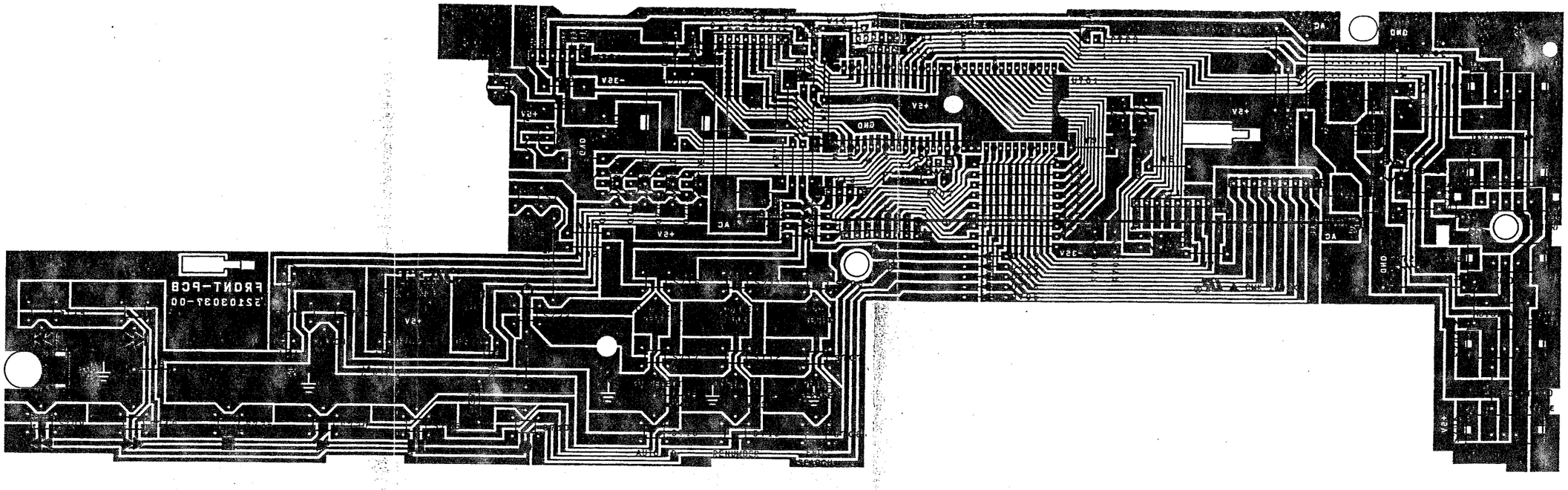
DIGITAL PCB ASSY



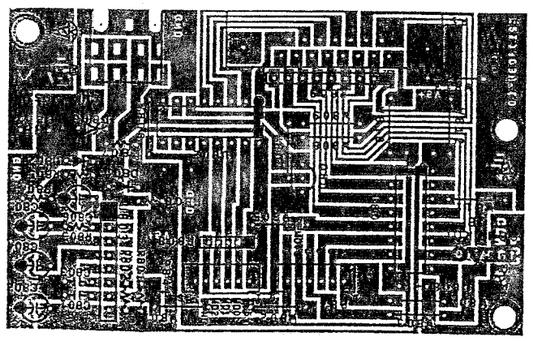
AUDIO PCB ASSY



FRONT PCB ASSY

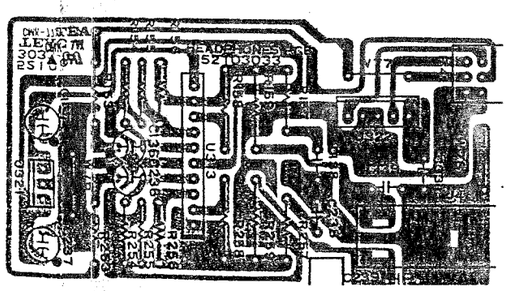


CONTROL PCB ASSY



REC-VR PCB ASSY

HEADPHONES PCB ASSY



OUTPUT-VR PCB ASSY

DIGITAL PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
Q428	13428288	TR.,(DTC144EKT-96)
R429	5280021300	R.,TRIMMER 10KB
R486	5280021100	R.,TRIMMER 4.7KB
R487	5280021100	R.,TRIMMER 4.7KB
R496	5280216500	R.,TRIMMER 220KB
R505	5280021300	R.,TRIMMER 10KB H.
R527	5242121800	R.,ARRAY RYLS-4J103
R528	5242122300	R.,ARRAY RYLS-11J103
R532	5242121800	R.,ARRAY RYLS-4J103
R538	5241183310	R.,IMCOMB. 1W 6.8 OHM
R539	5280021700	R.,TRIMMER,47KB H.
T401	5320046300	TRANS,PLL TC1027-04
T402	5286039000	COIL,OSC 9.4MHZ
TP401	5336303200	PLUG,CONN. B2B-EH(WHT)
TP402	5334042500	PLUG,CONN. 2P DSP02
TP403	5336303200	PLUG,CONN. B2B-EH(WHT)
TP404	5336303400	PLUG,CONN. B4B-EH(WHT)
TP405	5336303200	PLUG,CONN. B2B-EH(WHT)
TP406	5317002100	PIN,DH CHECK IPS-1136
TP407	5317002100	PIN,DH CHECK IPS-1136
TP410	5317002100	PIN,DH CHECK IPS-1136
TP411	5317002100	PIN,DH CHECK IPS-1136
TP412	5336303200	PLUG,CONN. B2B-EH(WHT)
TP413	5336303200	PLUG,CONN. B2B-EH(WHT)
U401	5220093600	IC.,DIGI. TC74HCU04AF-TP2
U402	5220093300	IC.,DIGI. TC74HC00AF-TP2
U403	5292808600	FILTER,EMC-EMT 10000PFC
U404	5220093300	IC.,DIGI. TC74HC00AF-TP2
U405	5220093600	IC.,DIGI. TC74HCU04AF-TP2
U406	5292808600	FILTER,EMC-EMT 10000PFC
U407	5292808600	FILTER,EMC-EMT 10000PFC
U408	5220094300	IC.,DIGI. MC34050MEL
U409	5220824700	MICROCOMPUTER,UPD75P402AC-013
U410	5220091600	IC.,DIGI. CX23033
U411	5220093400	IC.,DIGI. TC74HC02AF-TP2
U412	5220094000	IC.,DIGI. TC74HC109AF-TP2
U413	5292808600	FILTER,EMC-EMT 10000PFC
U414	5220093600	IC.,DIGI. TC74HCU04AF-TP2
U415	5220093600	IC.,DIGI. TC74HCU04AF-TP2
U416	5220093900	IC.,DIGI. TC74HC86AF-TP2
U417	5220093800	IC.,DIGI. TC74HC74AF-TP2
U418	5292808000	FILTER,EMC-EMT 100PFC
U419	5292808000	FILTER,EMC-EMT 100PFC
U420	5292808000	FILTER,EMC-EMT 100PFC
U421	5292808000	FILTER,EMC-EMT 100PFC
U422	5292808000	FILTER,EMC-EMT 100PFC
U423	5292808600	FILTER,EMC-EMT 10000PFC
U424	5220091100	IC.,DIGI. SM5813APT
U425	5292808000	FILTER,EMC-EMT 100PFC
U426	5292808000	FILTER,EMC-EMT 100PFC
U427	5292808000	FILTER,EMC-EMT 100PFC
U428	5292808000	FILTER,EMC-EMT 100PFC
U429	5292808600	FILTER,EMC-EMT 10000PFC
U430	5220091400	IC.,DIGI. HD49211FS
U431	5220094400	IC.,DIGI. HM65256BLF-12TT
U432	5292808600	FILTER,EMC-EMT 10000PFC
U433	5292808600	FILTER,EMC-EMT 10000PFC
U434	5292808600	FILTER,EMC-EMT 10000PFC
U435	5220444600	IC.,SN74LS624NS-ELS
U436	5292807800	FILTER,EMC-EMT 22PFC

DIGITAL PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
U437	5292808600	FILTER,EMC-EMT 10000PFC
U438	5220093500	IC.,DIGI. TC74HC04AF-TP2
U439	5220443600	IC.,HAI2062AMP
U440	5292807900	FILTER,EMC-EMT 47PFC
U441	5292807900	FILTER,EMC-EMT 47PFC
U442	5292808600	FILTER,EMC-EMT 10000PFC
U443	5292808600	FILTER,EMC-EMT 10000PFC
U444	5220093700	IC.,DIGI. TC74HC08AF-TP2
U445	5220093500	IC.,DIGI. TC74HC04AF-TP2
U446	5292808000	FILTER,EMC-EMT 100PFC
U447	5292808000	FILTER,EMC-EMT 100PFC
U448	5292808000	FILTER,EMC-EMT 100PFC
U449	5292808000	FILTER,EMC-EMT 100PFC
U451	5220444400	IC.,UPC358G2(MS)-E2
U452	5220444300	IC.,UPC324G2(MS)-E2
U453	5220091500	IC.,DIGI. HD49212
U454	5292809900	FILTER,BANDPASS (SYNC)
U455	5292809800	FILTER,LOWPASS (PILOT)
U456	5292808600	FILTER,EMC-EMT 10000PFC
U457	5292808600	FILTER,EMC-EMT 10000PFC
U458	5220444500	IC.,UPC393G2(MS)-E2
U459	5220444500	IC.,UPC393G2(MS)-E2
U460	5220094100	IC.,DIGI. TC4069UBF-TP2
U461	5220823302	MICROCOMPUTER,UPD75P116CW-003
U462	5220019700	IC.,LC7800
U463	5220430200	IC.,LB1649
U464	5220430200	IC.,LB1649
U465	5292808600	FILTER,EMC-EMT 10000PFC
U466	5220094200	IC.,DIGI. TC4538BF-TP2
X401	5347017000	OSC.,CRYSTAL 37.632MHZ
X402	5347017200	OSC.,CRYSTAL 11.2896MHZ
X403	5347017100	OSC.,CRYSTAL 12.288MHZ
X404	5347012000	OSC.,CERAMIC CST4,19MGW
X405	5347012000	OSC.,CERAMIC CST4,19MGW

Parts marked with *require longer delivery time.

FRONT PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200303700	FRONT PCB ASSY
	*5210303701	FRONT PCB
	*5332016900	IC.,SOCKET 64P
	*5555590000	PLATE(A),EARTH
	*5801349600	CUSION,FL
	*5801350100	SPACER,LED
D701	5224012920	DIODE,1S2473
D702	5224012920	DIODE,1S2473
D703	5224012920	DIODE,1S2473
D704	5224012920	DIODE,1S2473
D705	5224012920	DIODE,1S2473
D706	5224012920	DIODE,1S2473
D707	5224012920	DIODE,1S2473
D708	5224012920	DIODE,1S2473
D709	5224012920	DIODE,1S2473
D710	5225025600	LED.,SLP-677B-50
D711	5225021500	LED.,SLP177B-50
D712	5225025600	LED.,SLP-677B-50
D713	5225021600	LED.,SLP277B-50
D714	5225025600	LED.,SLP-677B-50
FL1	5347017300	TUBE,FL FIP10AMW8
P723	5336249200	PLUG,CONN. B02B-PH-K-S(WHT)
Q701	5230780920	TR.,2SC2603F
Q702	5230780920	TR.,2SC2603F
Q703	5232255620	TR.,DIGI. DTC114ES
Q704	5232255620	TR.,DIGI. DTC114ES
Q705	5232255620	TR.,DIGI. DTC114ES
Q706	5232255620	TR.,DIGI. DTC114ES
Q707	5232255620	TR.,DIGI. DTC114ES
R713	5242119200	R.,ARRAY RML5-4J223
R714	5242117300	R.,ARRAY RML-S8J-104
R715	5242117300	R.,ARRAY RML-S8J-104
R716	5242117300	R.,ARRAY RML-S8J-104
S701	5300915300	SW.,SLIDE 1-2N ESD1511205
S702	5300915300	SW.,SLIDE 1-2N ESD1511205
S703	5300915300	SW.,SLIDE 1-2N ESD1511205
S704	5300915300	SW.,SLIDE 1-2N ESD1511205
S705	5300915300	SW.,SLIDE 1-2N ESD1511205
S706	5302101800	SW.,TACT KHH15906
S707	5302101800	SW.,TACT KHH15906
S708	5302101800	SW.,TACT KHH15906
S709	5302101800	SW.,TACT KHH15906
S710	5302101800	SW.,TACT KHH15906
S711	5302101800	SW.,TACT KHH15906
S712	5302101800	SW.,TACT KHH15906
S713	5302101800	SW.,TACT KHH15906
S714	5302101800	SW.,TACT KHH15906
S715	5302101800	SW.,TACT KHH15906
S716	5302101800	SW.,TACT KHH15906
S717	5302101800	SW.,TACT KHH15906
S718	5302101800	SW.,TACT KHH15906
S719	5302101800	SW.,TACT KHH15906
S720	5302101800	SW.,TACT KHH15906
S721	5302101800	SW.,TACT KHH15906
S722	5302101800	SW.,TACT KHH15906
S723	5302101800	SW.,TACT KHH15906
S724	5302101800	SW.,TACT KHH15906
S725	5302101800	SW.,TACT KHH15906
U701	5220825200	MICROCOMPUTER, HD404729A72S
X701	5347012000	OSC.,CERAMIC CST4,19MGW

CONTROL PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200303800	CONTROL PCB ASSY
	*5210303800	CONTROL PCB
D801,802	5224015020	DIODE,1SS133T-77
D803	5224571801	DIODE,ZENER RD3.0FL2 FR
J1	5330016100	JACK,3 POLE
P1	5334055000	SOCKET,CONN. 15P
P841	5336251600	PLUG,CONN. B06B-PH-K-R(RED)
P874	5336249600	PLUG,CONN. B06B-PH-K-S(WHT)
Q801	5232255620	TR.,DIGI. DTC114ES
R808	5242121800	R.,ARRAY RYLS-4J103
R809	5242118900	R.,ARRAY RML5 8J223
U801	13442774	IC.,(SN74LS147N)
U802	13441784	IC.,(SN74LS145N)
U803	5220430900	IC.,IR3T11

HEADPHONES PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200303300	HEADPHONES PCB ASSY
	*5210303300	HEADPHONES PCB
J4	5330013500	JACK,3P FJ332DB-N
R158,258	5180018000	R.,CARBON R50 2.2 OHM
R159,259	5180044000	R.,CARBON R50 27 OHM
R4	5282417000	VR.,1S2UVR 9,20KAX2
U313	5220438700	IC.,LA6510

OUTPUT-VR PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200303400	OUTPUT-VR PCB ASSY
	*5210303400	OUTPUT-VR PCB
R1	*5282416900	VR.,1S2UVR 16,20KAX2

REC-VR PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*5200303500	REC-VR PCB ASSY
	*5210303500	REC-VR PCB
R2 R3	*5282022500	VR.,1S1UVR 16, 20KAX1

Parts marked with *require longer delivery time.

POWER SUPPLY PCB ASSY

REF.NO.		PARTS NO.	DESCRIPTION
		*5200304000	POWER SUPPLY PCB ASSY[J]
		*5200304010	POWER SUPPLY PCB ASSY[US]
		*5200304020	POWER SUPPLY PCB ASSY[C]
		*5200304030	POWER SUPPLY PCB ASSY[GE]
		*5200304040	POWER SUPPLY PCB ASSY[E]
		*5200304050	POWER SUPPLY PCB ASSY[UK]
		*5200304060	POWER SUPPLY PCB ASSY[A]
		*5210304002	POWER SUPPLY PCB
		*5800501502	HEATSINK
		*5780003008	SCREW,BIND M3X8
		*5555590000	PLATE(A),EARTH
		*5350015600	CODE,AC[J]
		*5350010700	CODE,AC[US,C,GE]
		*5350011700	CODE,AC[E]
		*5128047000	CODE,AC[UK]
		*5350008300	CODE,AC[A]
		*5332015800	HOLDER,FUSE[E,UK,A]
		*5730007500	COVER,CONDENSOR[E,UK,A]
C601-603	⚠	5267703800	C.,SPARK KIL. 4700PF 400V M
C604	⚠	5260428110	C.,ELEC. 4700UF 16V
C605,606	⚠	5262014700	C.,ELEC. 10000UF 16V
C607	⚠	5260425810	C.,ELEC. 470UF 16V
C609	⚠	5260424520	C.,ELEC. 220UF 10V
C610	⚠	5260420920	C.,ELEC. 0.47UF/50V
C613	⚠	5260424910	C.,ELEC. 220UF 50V
C615	⚠	5260424320	C.,ELEC. 100UF 50V
C617,618	⚠	12907113	C.,CC 25V 22000PF Z
D601-608	⚠	5224013210	DIODE,DS135D FA4 FF
D609		5224015020	DIODE,1SS133T-77
D610	⚠	5224013210	DIODE,DS135D FA4 FF
D611		5224580201	DIODE,ZENER RD39ELI FR
D612		5224574701	DIODE,ZENER RD8.2EL2 FR
F601	⚠	5142190000	FUSE,2.5A/250V T;MINI[E,UK,A]
F602	⚠	5142180000	FUSE,125MA/250V T;MINI[E,UK,A]
L601	⚠	5292806300	FILTER,NOISE FK0B16MH13
P001		5327007200	TERMINAL,2P
P623		5336303200	PLUG,CONN. B2B-EH(WHT)
P624		5336303300	PLUG,CONN. B3B-EH(WHT)
P642		5336303700	PUG,CONN. B7B-EH(WHT)
P671		5336303600	PLUG,CONN. B6B-EH(WHT)
Q601	⚠	5230509700	TR.,2SB1274R
Q602		5230780920	TR.,2SC2603F
Q603	⚠	5145085000	TR.,2SA-934R
Q604,605		5232255720	TR.,DIGI. DTC124ES
R601	⚠	5240026620	R.,CARBON 220 RIO T
S601	⚠	5300054700	SW.,PUSH SDDLDI 1-1
S602	⚠	5332019900	SELECTOR,VOLTAGE 1-3 FS908E[GE]
T601	⚠	5320059000	TRANS,POWER
U601	⚠	5220434600	IC.,M5F7809L
U602	⚠	5220428400	IC.,M5236L
U603		5220051800	IC.,TC74HC04P

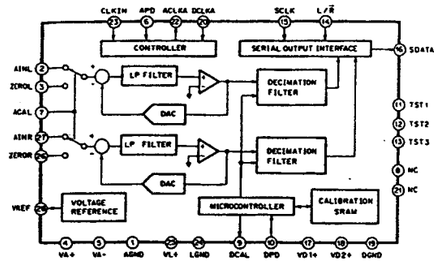
[J]:JAPAN [US]:U.S.A. [C]:CANADA [GE]:GENERAL EXPORT
[E]:EUROPE [UK]:U.K. [A]:AUSTRALIA

Parts marked with *require longer delivery time.

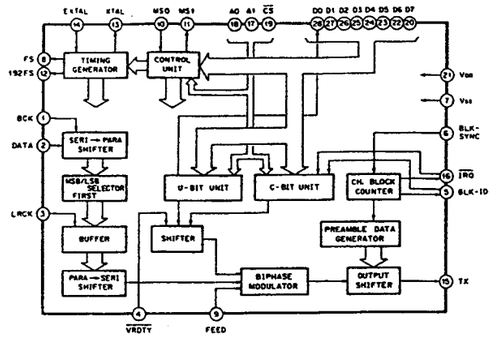
7. IC BLOCK DIAGRAMS

ICブロック・ダイアグラム

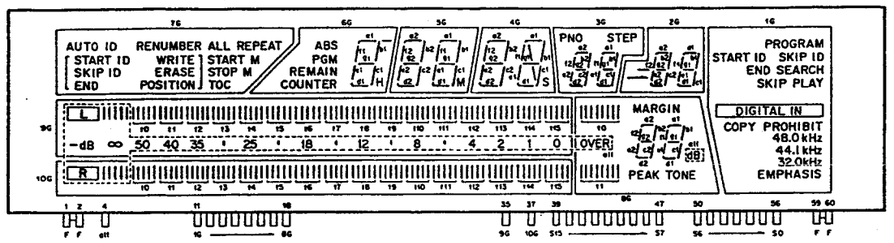
AK5326
16 bit Over-sampling Servo A/D Converter



CX23033
Digital Audio Data Modulation Transmitting IC

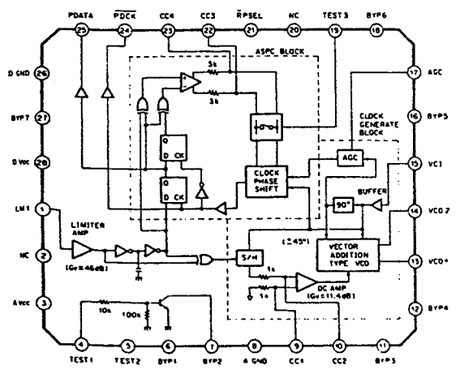


FIP10AMW8
FL Tube

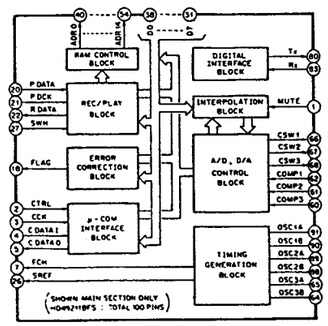


	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
S0	t0	t0	t0	TOC	COUNTER	d2	d2	d2	d2	
S1	t1	t1	t1	STOP M	REMAIN	e2	e2	e2	e2	
S2	t2	t2	a2, d2	START M	PGM	c2	c2	c2	c2	EMPHASIS
S3	t3	t3	e2	REPEAT	ABS	g2	g2	g2	g2	32.0kHz
S4	t4	t4	g2	ALL		f2	f2	f2	f2	44.1kHz
S5	t5	t5	c2	[ ]		b2	b2	b2	b2	48.0kHz
S6	t6	t6	b2	POSITION		a2	a2	a2	a2	COPY PROHIBIT
S7	t7	t7	MARGIN	ERASE	H	M	S	PNO	—	DIGITAL IN
S8	t8	t8	d1	WRITE	d1	d1	d1	d1	d1	
S9	t9	t9	e1	RENUMBER	e1	e1	e1	e1	e1	SKIP PLAY
S10	t10	t10	c1	END	c1	c1	c1	c1	c1	SEARCH
S11	t11	t11	g1	SKIP ID	g1	g1	g1	g1	g1	END
S12	t12	t12	f1	START ID	f1	f1	f1	f1	f1	SKIP ID
S13	t13	t13	b1	AUTO ID	b1	b1	b1	b1	b1	START ID
S14	t14	t14	PEAK TONE		—			STEP	—	
S15	t15	t15	a1		a1	a1	a1	a1	a1	PROGRAM

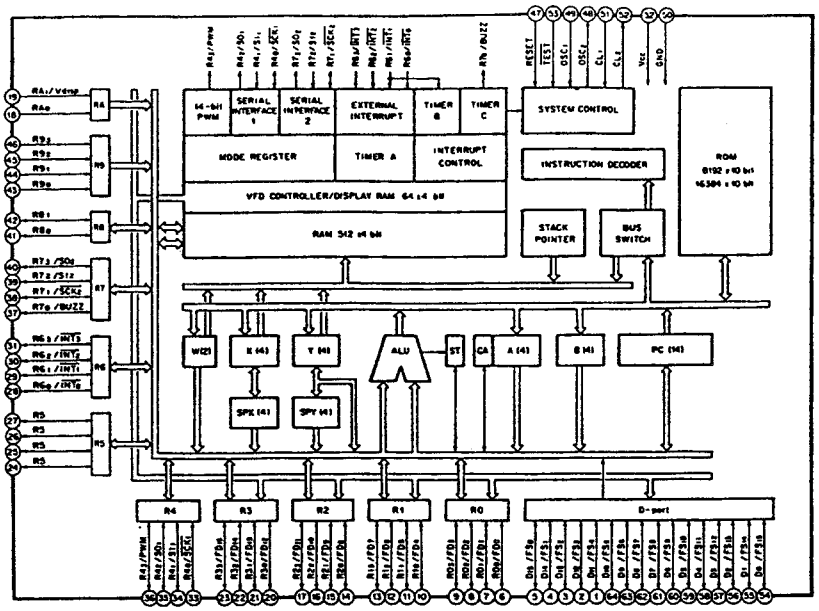
HA12062AMP
Data Strobe IC



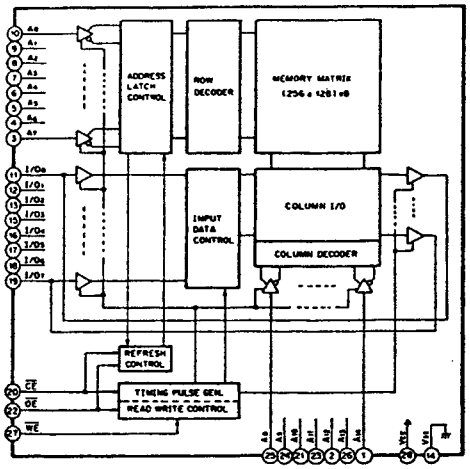
HD49211BFS
Single Processing LSI



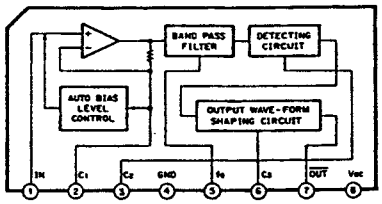
HD4074709S
4 bit Single-chip Microcomputer



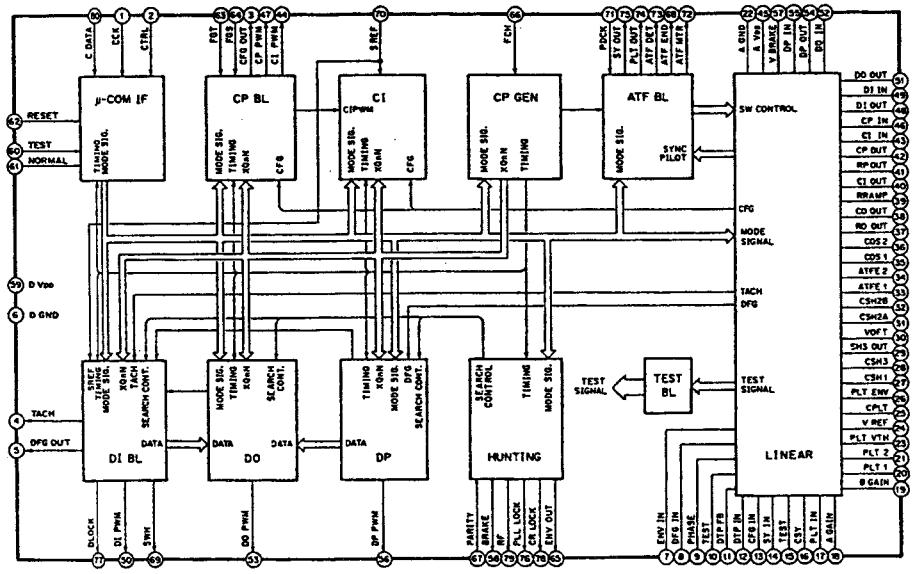
HM65256BLF
256K-bit High Speed CMOS Pseudo Static RAM



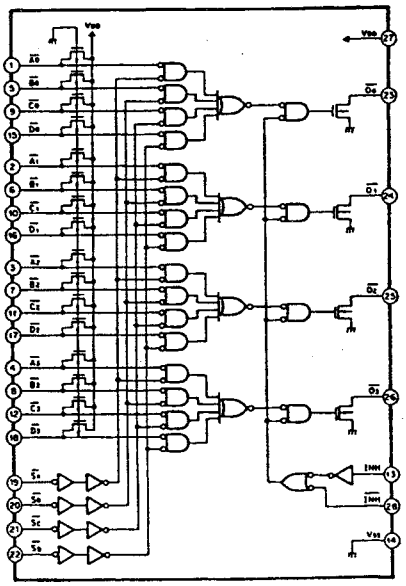
IR3T21
Infrared Remote-control Receiver



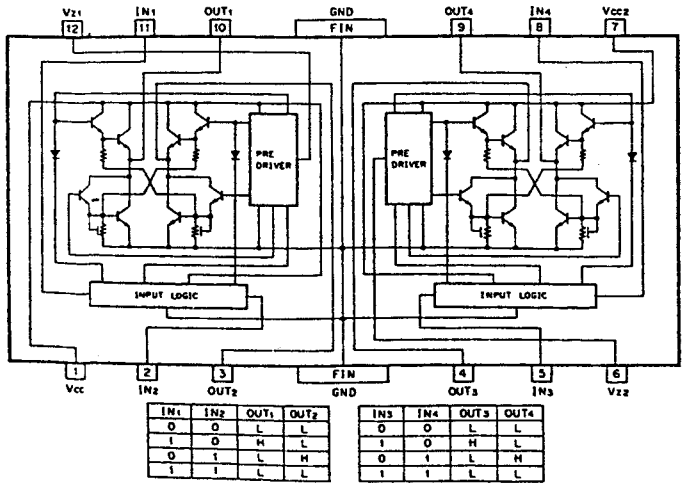
HD49212
Digital Servo LSI



LC7800
Input Expander



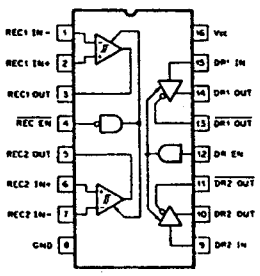
LB1649
Motor Driver



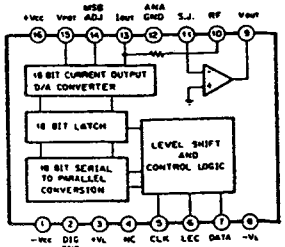
IN1	IN2	OUT1	OUT2
0	0	L	L
1	0	H	L
0	1	L	H
1	1	L	L

IN3	IN4	OUT3	OUT4
0	0	L	L
1	0	H	L
0	1	L	H
1	1	L	L

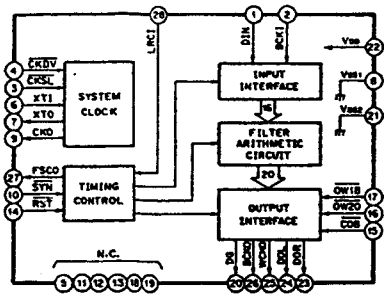
MC34050MEL
Dual RS-422/423 Tranceiver



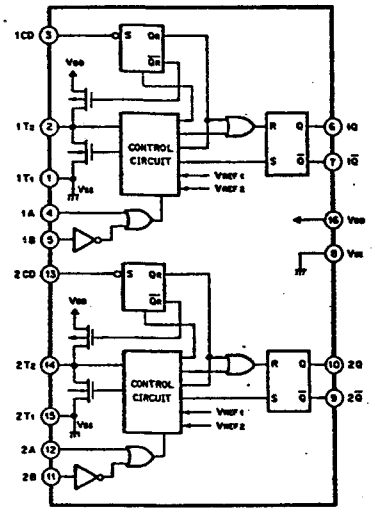
PCM61P
18-bit Monolithic Audio A/D Converter



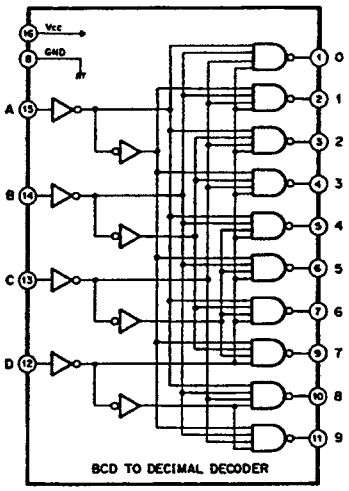
SM5813APT
8-times Over-sampling Digital Filter



TC4538BF
Dual Precisi on Retriggerable/Resettable Monostable Multivibrator



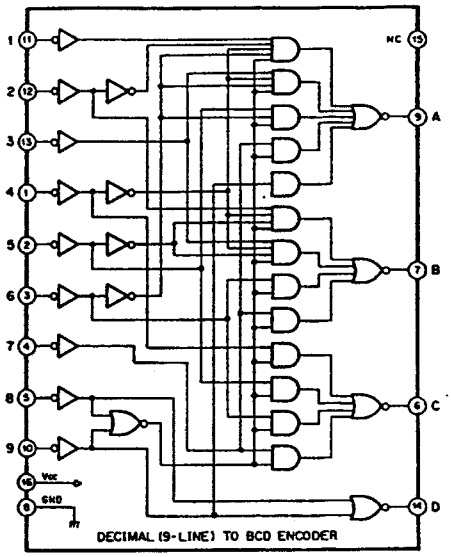
SN74LS145N
BCD-to-Decimal Decoder/Drivers



FUNCTION TABLE

No.	INPUTS				OUTPUTS									
	D	C	B	A	0	1	2	3	4	5	6	7	8	9
0	L	L	L	L	L	H	H	H	H	H	H	H	H	H
1	L	L	L	H	H	L	H	H	H	H	H	H	H	H
2	L	L	H	L	H	H	L	H	H	H	H	H	H	H
3	L	L	H	H	H	H	H	L	H	H	H	H	H	H
4	L	H	L	L	H	H	H	H	L	H	H	H	H	H
5	L	H	L	H	H	H	H	H	H	L	H	H	H	H
6	L	H	H	L	H	H	H	H	H	H	L	H	H	H
7	L	H	H	H	H	H	H	H	H	H	H	L	H	H
8	H	L	L	L	H	H	H	H	H	H	H	H	L	H
9	H	L	L	H	H	H	H	H	H	H	H	H	H	L

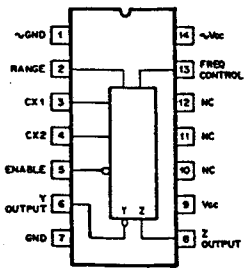
SN74LS147N
Decimal-to BCD Encoders



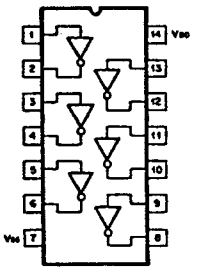
FUNCTION TABLE (X : IRRELEVANT)

No.	INPUTS									OUTPUTS			
	1	2	3	4	5	6	7	8	9	D	C	B	A
9	X	X	X	X	X	X	X	X	L	L	H	H	L
8	X	X	X	X	X	X	X	L	H	L	H	H	H
7	X	X	X	X	X	X	L	H	H	H	L	L	L
6	X	X	X	X	X	L	H	H	H	H	L	L	H
5	X	X	X	X	L	H	H	H	H	H	L	H	L
4	X	X	X	L	H	H	H	H	H	H	L	H	H
3	X	X	L	H	H	H	H	H	H	H	H	L	L
2	X	L	H	H	H	H	H	H	H	H	H	L	H
1	L	H	H	H	H	H	H	H	H	H	H	H	L
0	H	H	H	H	H	H	H	H	H	H	H	H	H

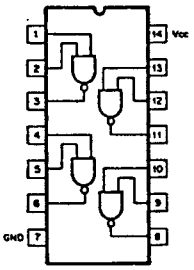
SN74LS624N
Voltage-controlled Oscillator



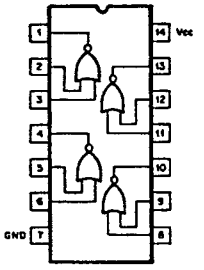
TC4069UBF
Hex Inverter



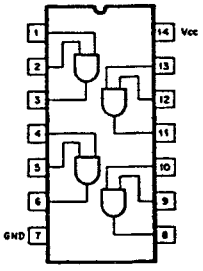
TC74HC00AF
QUAD 2-input NAND Gate



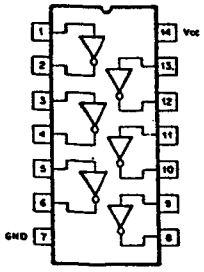
TC74HC002AF
Quad 2-input NOR Gate



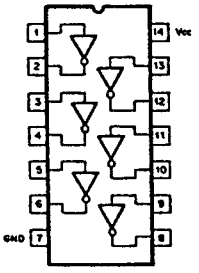
TC74HC08AF
Quad 2-input AND Gate



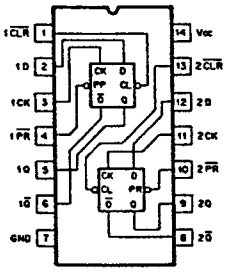
TC74HC04AF
Hex Inverter



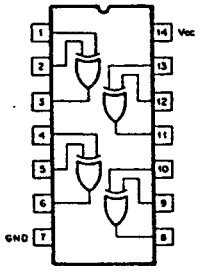
TC74HCU04AF
Hex Inverter



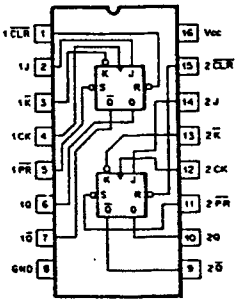
TC74HC74AF
Dual D-type Flip-flop with Preset and Clear

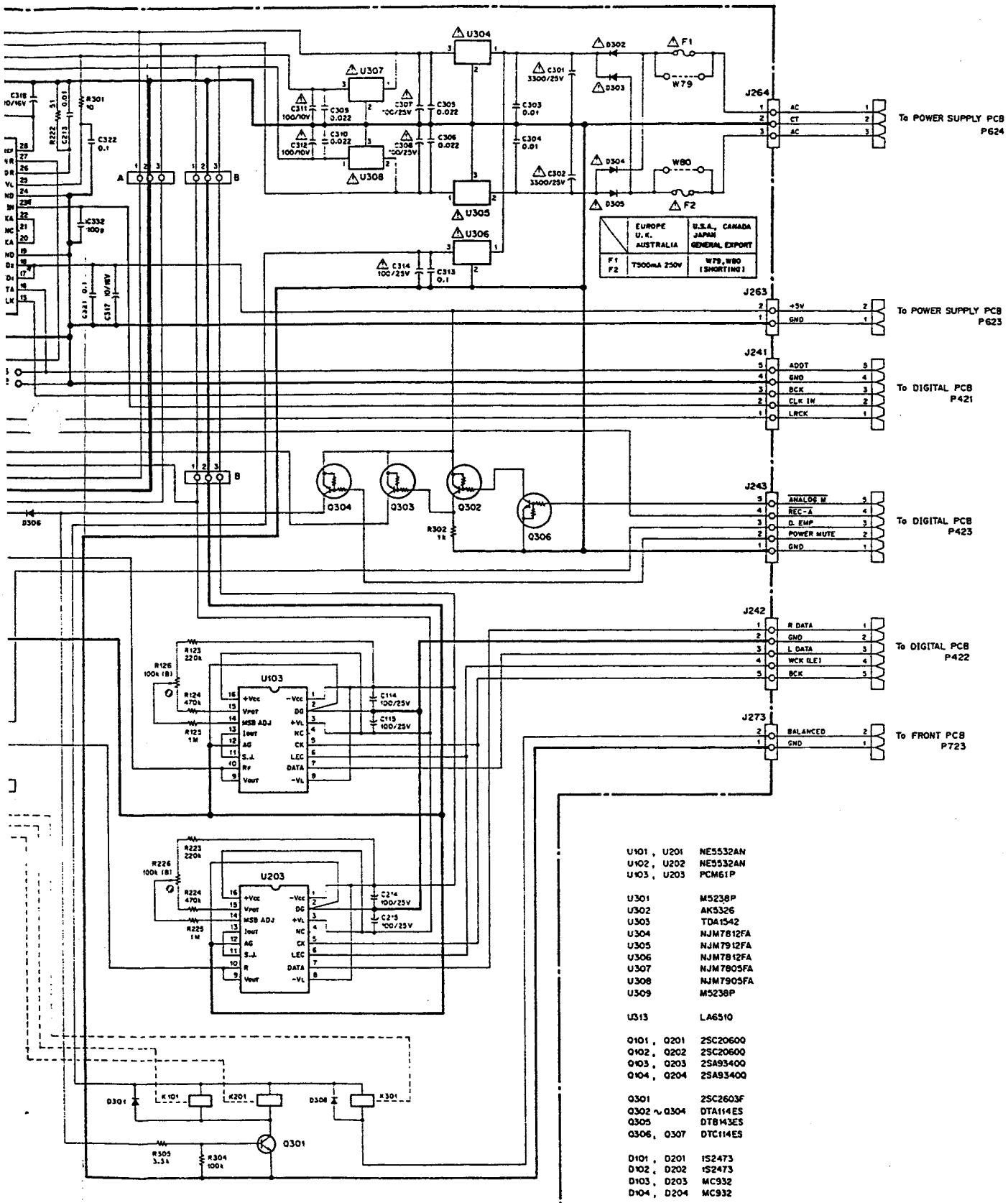


TC74HC86AF
Quad Exclusive OR Gate



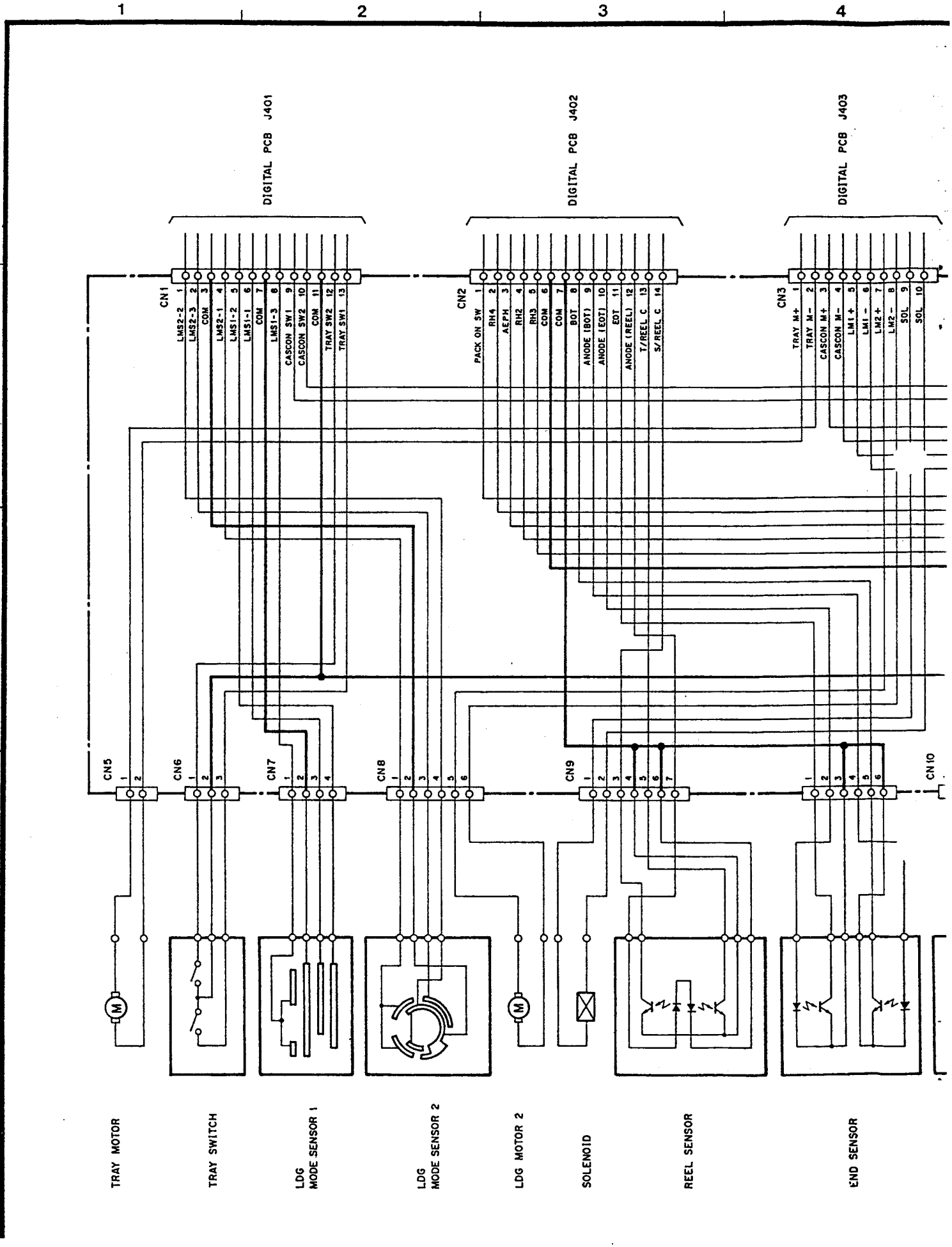
TC74HC109AF
Dual J-K Flip-flop with Preset and Clear



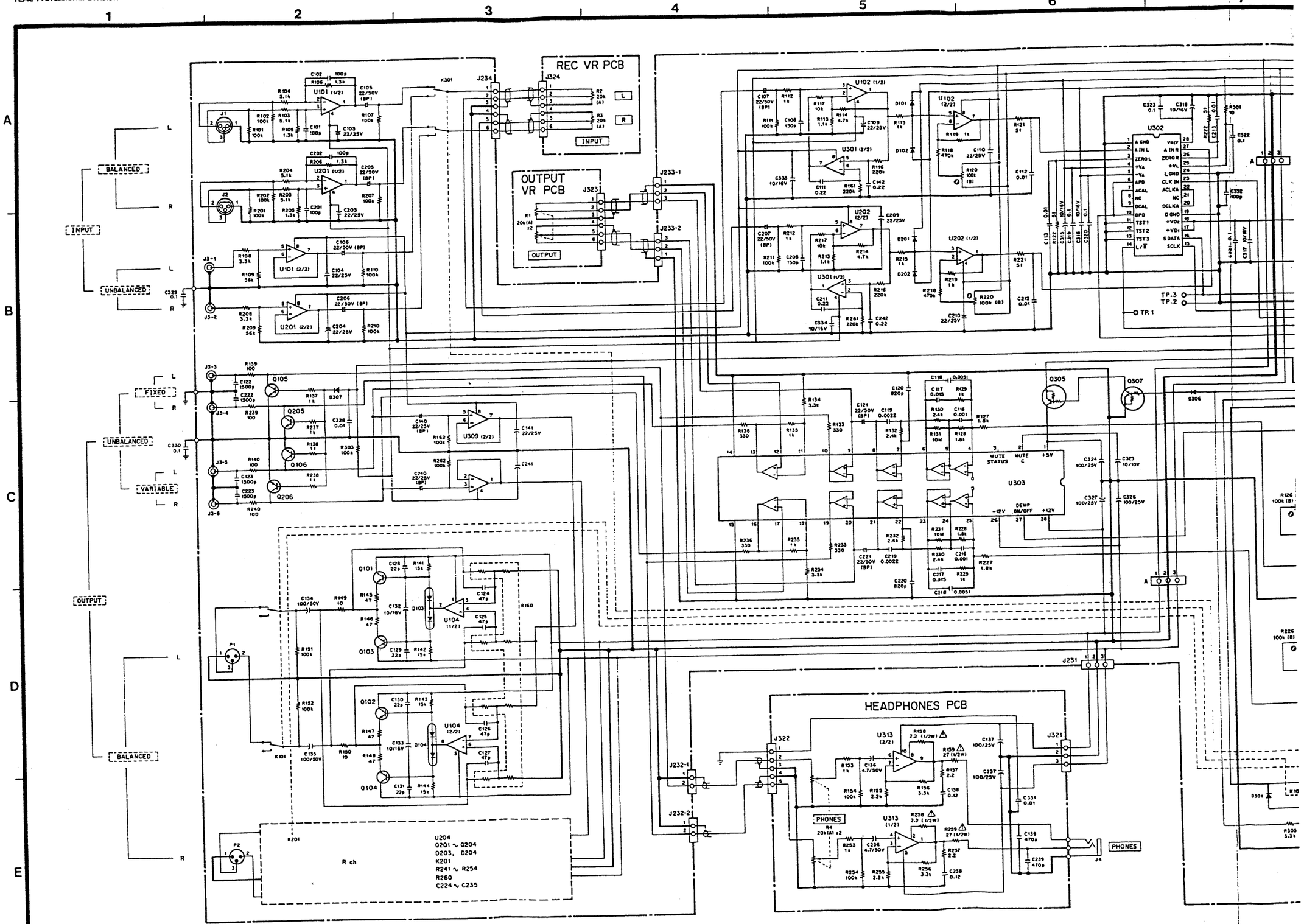


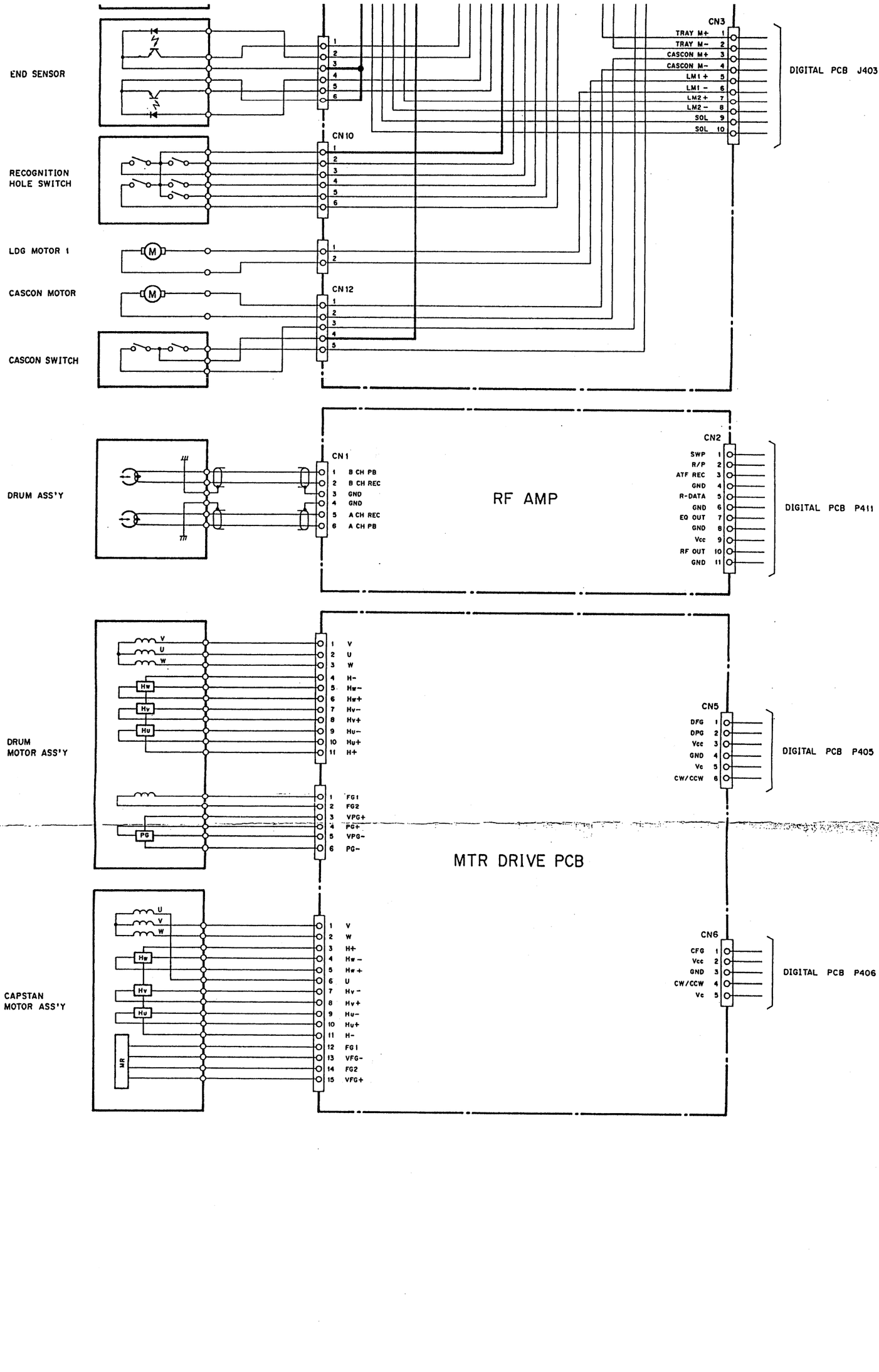
AUDIO PCB

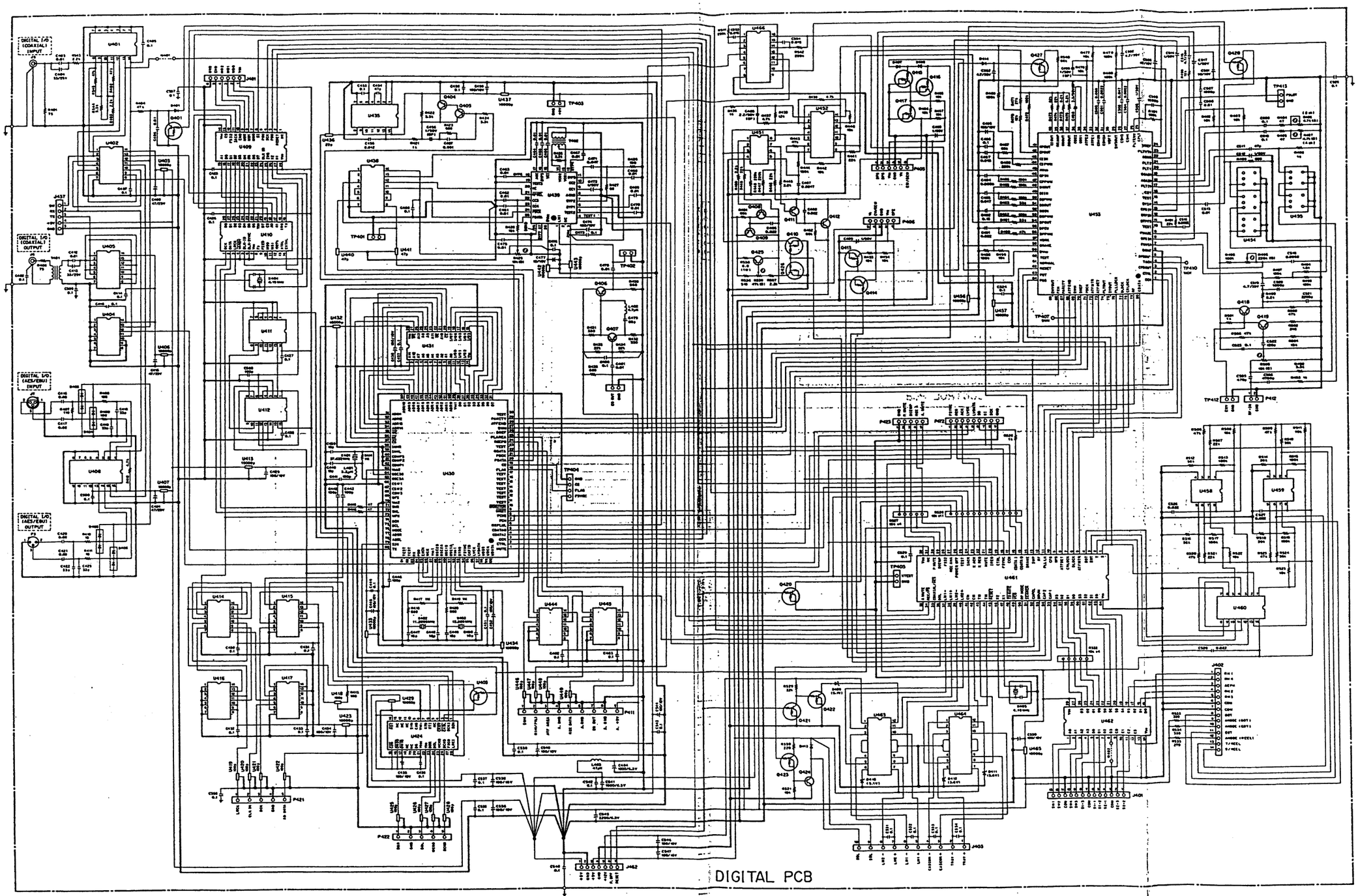
U101 , U201	NE5532AN
U102 , U202	NE5532AN
U103 , U203	PCM61P
U301	M5238P
U302	AK5326
U303	TDA1542
U304	NJM7812FA
U305	NJM7912FA
U306	NJM7812FA
U307	NJM7805FA
U308	NJM7905FA
U309	M5238P
U313	LA6510
Q101 , Q201	2SC20600
Q102 , Q202	2SC20600
Q103 , Q203	2SA93400
Q104 , Q204	2SA93400
Q301	2SC2603F
Q302 ∿ Q304	DTA114ES
Q305	DTB143ES
Q306 , Q307	DTC114ES
D101 , D201	1S2473
D102 , D202	1S2473
D103 , D203	MC932
D104 , D204	MC932
D301	ISR35-200A
D302 ∿ D305	DS135
D306 , D307	1S2473
D308	ISR35-200A


1
2
3
4
A
B
C
D
E
DIGITAL PCB J401
DIGITAL PCB J402
DIGITAL PCB J403
CN1
LMS2-2 1
LMS2-3 2
COM 3
LMS2-1 4
LMS1-2 5
LMS1-1 6
COM 7
LMS1-3 8
CASCON SW1 9
CASCON SW2 10
COM 11
TRAY SW2 12
TRAY SW1 13
CN2
PACK ON SW 1
RH4 2
AEPH 3
RH2 4
RH3 5
COM 6
COM 7
BOT 8
ANODE (BOT) 9
ANODE (EOT) 10
EOT 11
ANODE (REEL) 12
T/REEL C 13
S/REEL C 14
CN3
TRAY M+ 1
TRAY M- 2
CASCON M+ 3
CASCON M- 4
LM1+ 5
LM1- 6
LM2+ 7
LM2- 8
SOL 9
SOL 10
CN5
CN6
CN7
CN8
CN9
CN10
TRAY MOTOR
TRAY SWITCH
LDG MODE SENSOR 1
LDG MODE SENSOR 2
LDG MOTOR 2
SOLENOID
REEL SENSOR
END SENSOR

TASCAM TEAC Professional Division SCHEMATIC DIAGRAM **DA-30** AUDIO PCB




END SENSOR
RECOGNITION HOLE SWITCH
LDG MOTOR 1
CASCON MOTOR
CASCON SWITCH
CN10
CN12
CN3
TRAY M+ 1
TRAY M− 2
CASCON M+ 3
CASCON M− 4
LM1 + 5
LM1 − 6
LM2 + 7
LM2 − 8
SOL 9
SOL 10
DIGITAL PCB J403
DRUM ASS'Y
CN1
1 B CH PB
2 B CH REC
3 GND
4 GND
5 A CH REC
6 A CH PB
RF AMP
CN2
SWP 1
R/P 2
ATF REC 3
GND 4
R-DATA 5
GND 6
EQ OUT 7
GND 8
Vcc 9
RF OUT 10
GND 11
DIGITAL PCB P411
DRUM MOTOR ASS'Y
1 V
2 U
3 W
4 H−
5 Hw−
6 Hw+
7 Hv−
8 Hv+
9 Hu−
10 Hu+
11 H+
1 FG1
2 FG2
3 VPG+
4 PG+
5 VPG−
6 PG−
MTR DRIVE PCB
CN5
DFG 1
DPG 2
Vcc 3
GND 4
Vc 5
CW/CCW 6
DIGITAL PCB P405
CAPSTAN MOTOR ASS'Y
1 V
2 W
3 H+
4 Hw −
5 Hw +
6 U
7 Hv −
8 Hv+
9 Hu−
10 Hu+
11 H−
12 FG1
13 VFG−
14 FG2
15 VFG+
CN6
CFG 1
Vcc 2
GND 3
CW/CCW 4
Vc 5
DIGITAL PCB P406

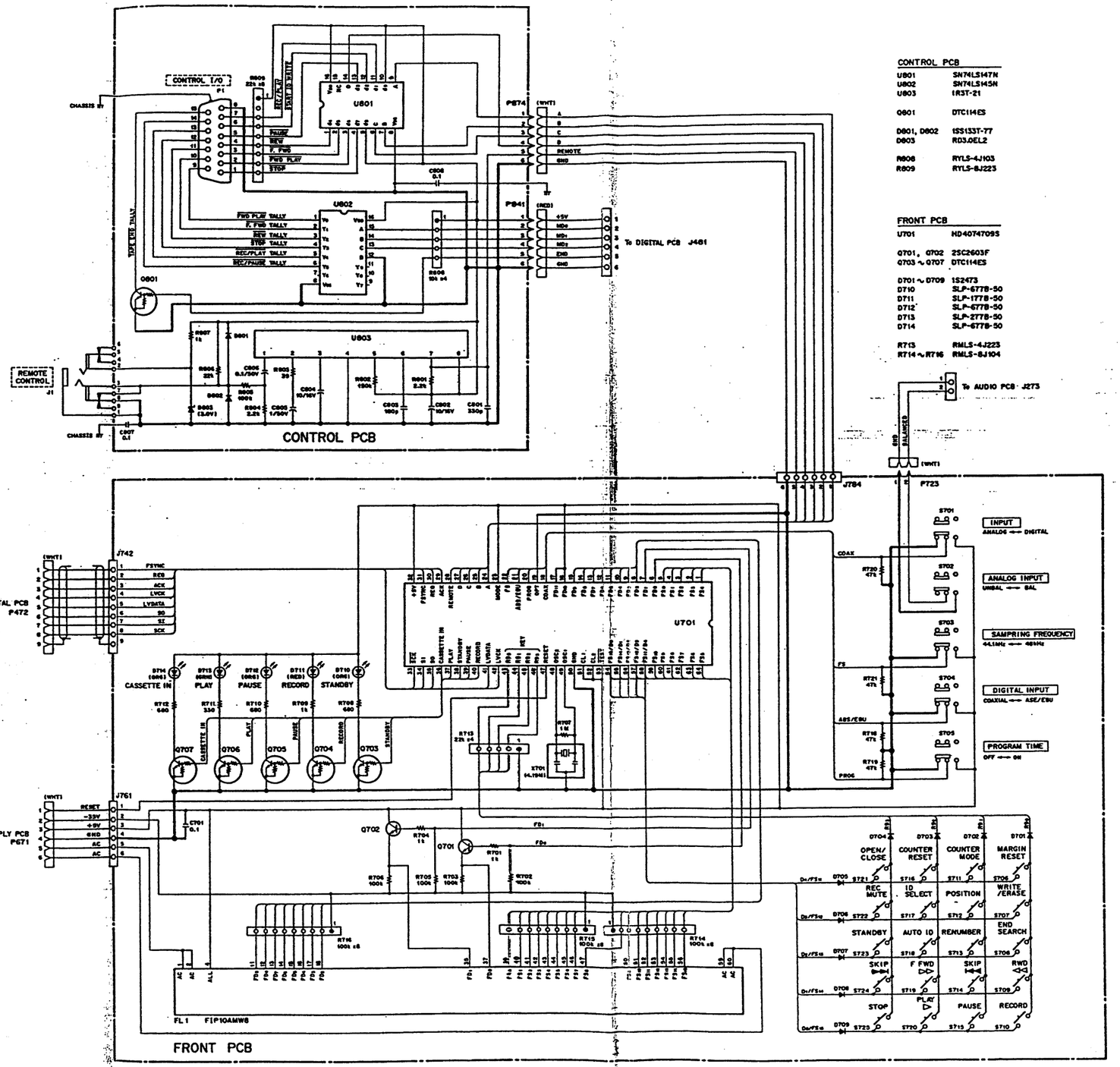


DIGITAL PCB

DA-30 DIGITAL AUDIO TAPE DECK

1 2 3 4 5 6 7

A B C D E



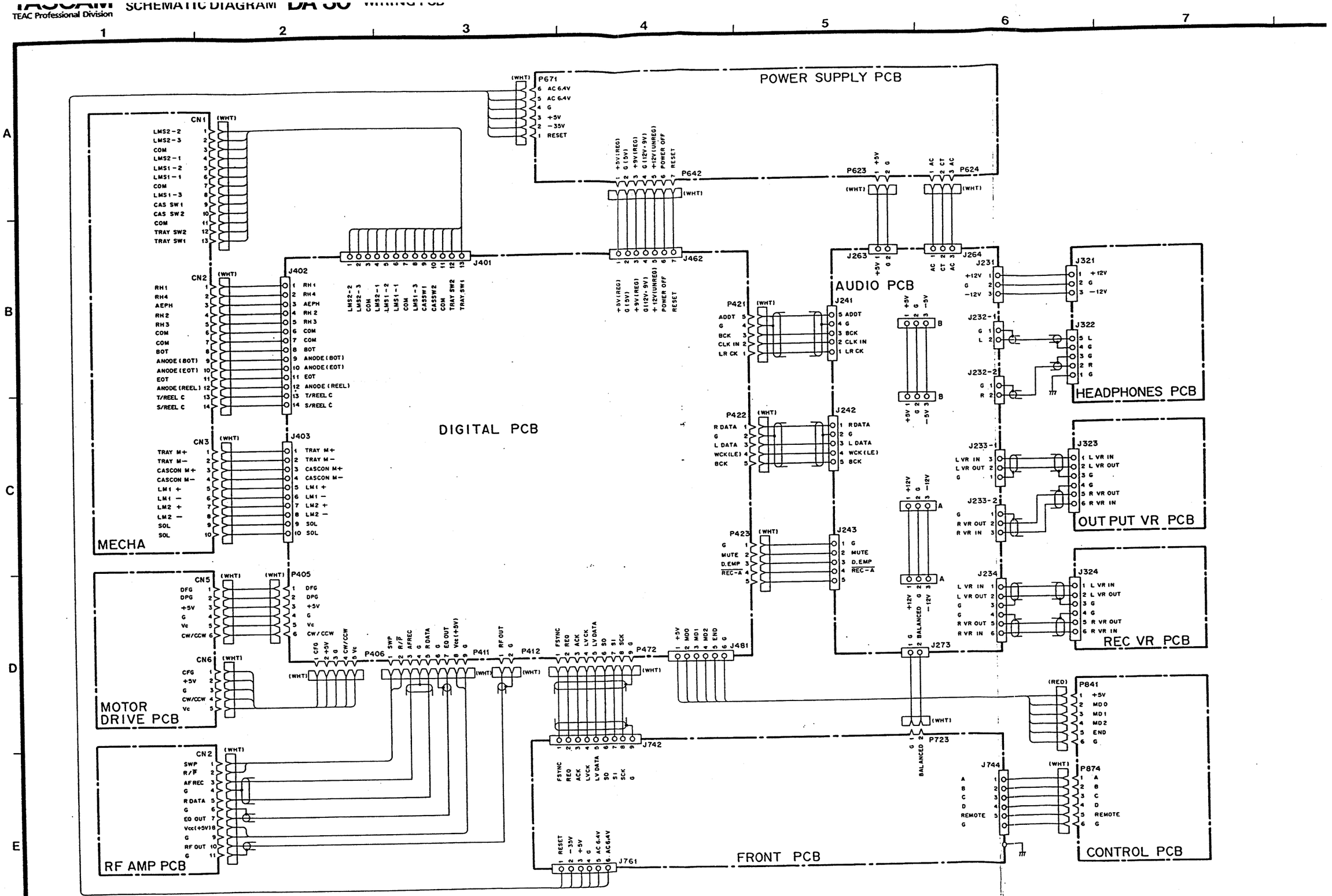
CONTROL PCB

U601	SN74LS147N
U602	SN74LS145N
U603	IR3T-21
Q601	DTC114ES
D601, D602	1SS133T-77
D603	RD3.0EL2
R606	RYLS-4J103
R609	RYLS-8J223

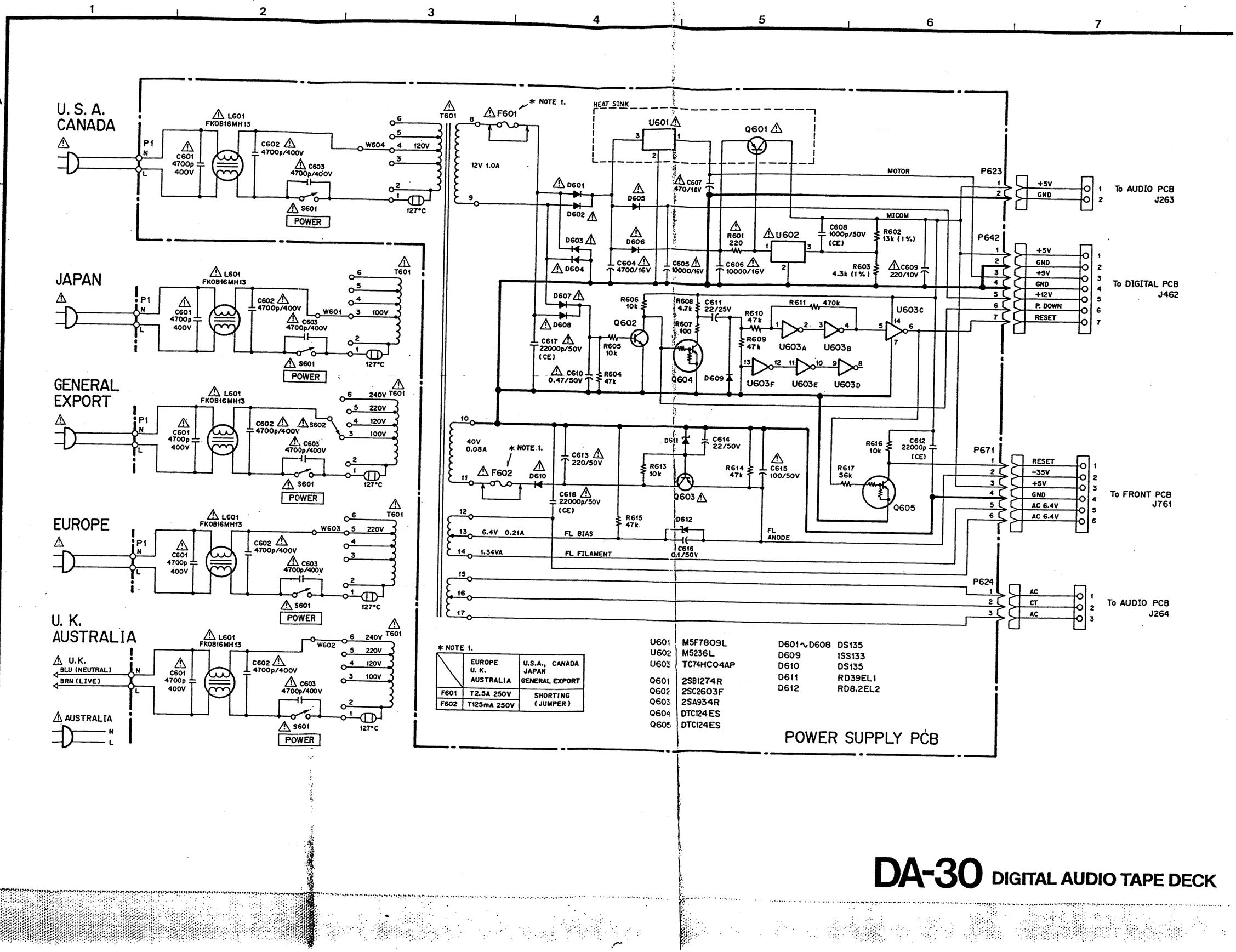
FRONT PCB

U701	HD404704095
Q701, Q702	2SC2603F
Q703 ~ Q707	DTC114ES
D701 ~ D709	1S2473
D710	SLP-677B-50
D711	SLP-177B-50
D712	SLP-677B-50
D713	SLP-277B-50
D714	SLP-677B-50
R713	RMLS-4J223
R714 ~ R716	RMLS-8J104

DA-30 DIGITAL AUDIO TAPE DECK



DA-30 DIGITAL AUDIO TAPE DECK



* NOTE 1.

	EUROPE U. K. AUSTRALIA	U.S.A., CANADA JAPAN GENERAL EXPORT
F601	T2.5A 250V	SHORTING (JUMPER)
F602	T125mA 250V	

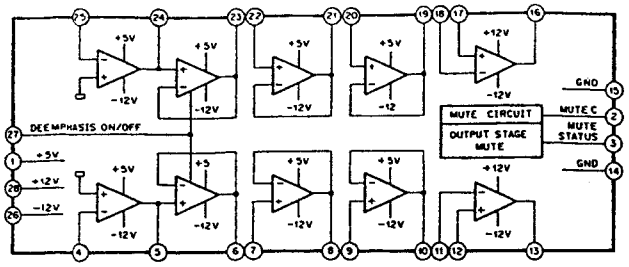
U601	M5F7809L
U602	M5236L
U603	TC74HC04AP
Q601	2SB1274R
Q602	2SC2603F
Q603	2SA934R
Q604	DTC124ES
Q605	DTC124ES

D601∿D608	DS135
D609	1SS133
D610	DS135
D611	RD39EL1
D612	RD8.2EL2

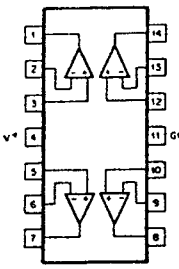
POWER SUPPLY PCB

DA-30 DIGITAL AUDIO TAPE DECK

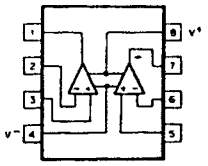
TDA1542
Dual Channel Active Element for Post Filtering



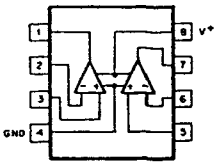
μ PC324G2W
Quad Operational Amplifier



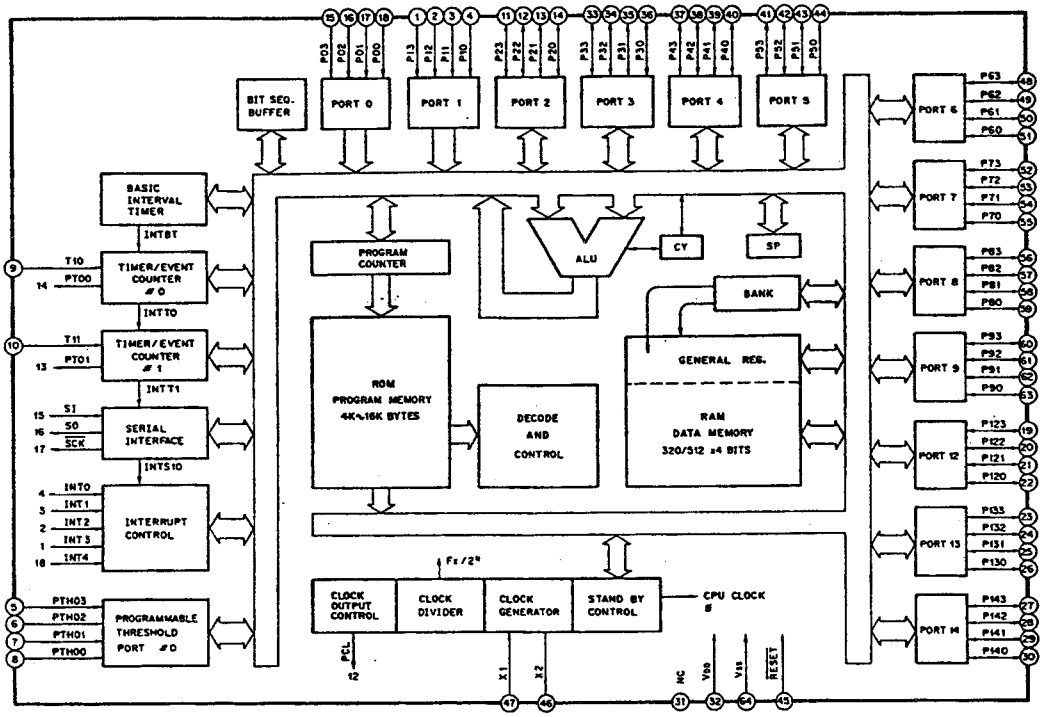
μ PC358G2
Dual Operational Amplifier



μ PC393G2
Dual Comparator



μ PD75P116CW
4-bit Single-chip Microcomputer



μ PD75P402C
4-bit Single-chip Microcomputer